

<b>SOLICITATION, OFFER, AND AWARD</b> <i>(Construction, Alteration, or Repair)</i>	1. SOLICITATION NUMBER	2. TYPE OF SOLICITATION <input type="checkbox"/> SEALED BID (IFB) <input type="checkbox"/> NEGOTIATED (RFP)	3. DATE ISSUED	PAGE OF PAGES
				1 5

**IMPORTANT** - The "offer" section on the reverse must be fully completed by offeror.

4. CONTRACT NUMBER 47PC0319C0002	5. REQUISITION/PURCHASE REQUEST NUMBER EQ2PCD-19-0001	6. PROJECT NUMBER
7. ISSUED BY OPERATIONS BRANCH C One World Trade Center New York, NY 10007	CODE 2PQC	8. ADDRESS OFFER TO 2PQC OPERATIONS BRANCH C One World Trade Center New York, NY 10007
9. FOR INFORMATION CALL:	a. NAME Sebastian Asaro	b. TELEPHONE NUMBER (Include area code) (NO COLLECT CALLS) 212-264-2713

#### SOLICITATION

NOTE: In sealed bid solicitations "offer" and "offeror" mean "bid and "bidder".

10. THE GOVERNMENT REQUIRES PERFORMANCE OF THE WORK DESCRIBED IN THESE DOCUMENTS (Title, identifying number, date)

11. The contractor shall begin performance within <u>21</u> calendar days and complete it within _____ calendar days after receiving <input type="checkbox"/> award, <input checked="" type="checkbox"/> notice to proceed. This performance period is <input checked="" type="checkbox"/> mandatory <input type="checkbox"/> negotiable. (See _____ ).	12b. CALENDAR DAYS  14
12a. THE CONTRACTOR MUST FURNISH ANY REQUIRED PERFORMANCE AND PAYMENT BONDS? (If "YES", indicate within how many calendar days after award in Item 12b.) <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	

#### 13. ADDITIONAL SOLICITATION REQUIREMENTS:

- a. Sealed offers in original and \_\_\_\_\_ copies to perform the work required are due at the place specified in Item 8 by \_\_\_\_\_ (hour) local time \_\_\_\_\_ (date). If this is a sealed bid solicitation, offers will be publicly opened at that time. Sealed envelopes containing offers shall be marked to show the offeror's name and address, the solicitation number, and the date and time offers are due.
- b. An offer guarantee ☐ is, ☐ is not required.
- c. All offers are subject to the (1) work requirements, and (2) other provisions and clauses incorporated in the solicitation in full text or by reference.
- d. Offers providing less than \_\_\_\_\_ calendar days for Government acceptance after the date offers are due will not be considered and will be rejected.

**OFFER (Must be fully completed by offeror)**

14. NAME AND ADDRESS OF OFFEROR (Include ZIP Code)

Volmar Construction Inc.  
4400 2nd Ave  
Brooklyn, NY 11232  
DUNS: (b)(4)  
CAGE Code: 0GZH1

15. TELEPHONE NUMBER (Include area code)

16. REMITTANCE ADDRESS (Include only if different than Item 14.)

CODE

FACILITY CODE

17. The offeror agrees to perform the work required at the prices specified below in strict accordance with the terms of this solicitation, if this offer is accepted by the Government in writing within \_\_\_\_\_ calendar days after the date offers are due. (Insert any number equal to or greater than the minimum requirement stated in Item 13d. Failure to insert any number means the offeror accepts the minimum in Item 13d.)

AMOUNTS

18. The offeror agrees to furnish any required performance and payment bonds.

**19. ACKNOWLEDGMENT OF AMENDMENTS**

(The offeror acknowledges receipt of amendments to the solicitation -- give number and date of each)

AMENDMENT NUMBER	00001	00002	00003	00004	00005					
DATE.	08/17/18	08/23/18	09/05/18	10/29/18	11/08/18					

20a. NAME AND TITLE OF PERSON AUTHORIZED TO SIGN OFFER (Type or print)

(b) (6) Executive Vice President

20b. SIGNATURE

(b) (6)

20c. OFFER DATE

02/01/2019

**AWARD (To be completed by Government)**

21. ITEMS ACCEPTED:

CLIN 0001 - \$495,000.00

All other CLINs remain optional. As of this time they are accepted as the Guaranteed Maximum Price, but not yet exercised by the government.

22. AMOUNT

\$495,000.00

23. ACCOUNTING AND APPROPRIATION DATA

Please see attached

24. SUBMIT INVOICES TO ADDRESS SHOWN IN  
(4 copies unless otherwise specified)ITEM  
7

25. OTHER THAN FULL AND OPEN COMPETITION PURSUANT TO

☐ 10 U.S.C. 2304(c) ( ) ☐ 41 U.S.C. 3304(a) ( )

26. ADMINISTERED BY

2PQC

OPERATIONS BRANCH C  
One World Trade Center  
New York, NY 10007

27. PAYMENT WILL BE MADE BY

<https://finance3.gsa.gov/> / PBS PAYMENTS BRANCH  
P.O. BOX 17181  
FORT WORTH, TX 76102-0181 USA

**CONTRACTING OFFICER WILL COMPLETE ITEM 28 OR 29 AS APPLICABLE**

☐ 28. NEGOTIATED AGREEMENT (Contractor is required to sign this document and return \_\_\_\_\_ copies to issuing office.) Contractor agrees to furnish and deliver all items or perform all work requirements identified on this form and any continuation sheets for the consideration stated in this contract. The rights and obligations of the parties to this contract shall be governed by (a) this contract award, (b) the solicitation, and (c) the clauses, representations, certifications, and specifications incorporated by reference in or attached to this contract.

☐ 29. AWARD (Contractor is not required to sign this document.) Your offer on this solicitation is hereby accepted as to the items listed. This award consummates the contract, which consists of (a) the Government solicitation and your offer, and (b) this contract award. No further contractual document is necessary.

30a. NAME AND TITLE OF CONTRACTOR OR PERSON AUTHORIZED TO SIGN  
(Type or print)

(b) (6) Executive Vice President

31a. NAME OF CONTRACTING OFFICER (Type or print)

Sebastian Asaro

30b. SIGNATURE

(b) (6)

30c. DATE

02/01/2019

31b. UNITED STATES OF AMERICA

BY

31c. DATE

SF1442 List of Accounting Strings

Accounting String	Amount Obligated
EN-47PC0319C0002.2019.192X.02.P0240001.PG55.PG211.N20.VNY00081.NY0282ZZ.638.....VNY00081NY0282ZZ.CIP IMP.1.0.	\$495,000.00

ITEM NO., FORM OR STOCK NUMBER	DESCRIPTION OF ARTICLES OR SERVICES	QUAN- TITY	UNIT OF ISSUE	UNIT PRICE	AMOUNT
0001	Design - Base Award CMc Services to design 26 Federal Plaza - Broadway Plaza Reconstruction and Roof Replacement EN-47PC0319C0002.2019.192X.02 P0240001.PG55.PG211.N20.VNY00081 NY0282ZZ.638.....VNY00081NY0282ZZ CIPIMP.1.0. Obligated: \$495,000.00  PoP: 01/29/2019 - 08/15/2019	1	LS	(b)(4)	\$495,000.00
0002	Construction Option Broadway Plaza Reconstruction PoP: 08/15/2019 - 08/15/2022	1	LS	(b)(4)	(b)(4)
0003	Option 1 Early Demo Package Option 1 - Early Demo Package PoP: 02/01/2019 - 08/15/2022	1	LS	(b)(4)	(b)(4)
0004	Option 3 - Roof Replacement Option 3 - Roof Replacement PoP: 08/15/2019 - 08/15/2022	1	LS	(b)(4)	(b)(4)
0005	CMc Contingency - 0.00% CMc Contingency - 0.00% PoP: 08/15/2019 - 08/15/2022	1	LS	(b)(4)	(b)(4)
0006	Overhead Overhead PoP: 08/15/2019 - 08/15/2022	1	LS	(b)(4)	(b)(4)
0007		1	LS	(b)(4)	(b)(4)

ITEM NO., FORM OR STOCK NUMBER	DESCRIPTION OF ARTICLES OR SERVICES	QUAN- TITY	UNIT OF ISSUE	UNIT PRICE	AMOUNT
0008	Profit Profit PoP: 08/15/2019 - 08/15/2022  General Conditions General Conditions PoP: 08/15/2019 - 08/15/2022	1	LS	(b)(4)	(b)(4)

**Construction Manager as Constructor (CMc) Contract for:**  
**26 Federal Broadway Plaza Reconstruction and Roof Repair in New York, NY**  
**The Agreement**

#### IV. Contract Clauses

- A. Public Building Services Contract Clauses
- B. Clauses Incorporated in Full Text
- C. Additional Clauses
- D. Clauses Incorporated by Reference
- E. Subcontract Requirements

## **Project Information**

### **I.A. Project Summary**

This is a Construction Manager as Constructor (CMc) Contract, and includes requirements for the Design Phase Services and the option(s) for Construction Services at a Guaranteed Maximum Price (GMP) Option.

This is a major Repair and Alteration project which involves immediate repair to the structure in order to fix extensive damage caused by water infiltration, along with the removal and replacement of the existing plaza surfaces to expose and then repair/waterproof the structure below. Furthermore, there will be new roofing system installation on floors 42, 43 and 44 of the building.

The requirement is further defined in the attached Statement of Work.

### **I.B. The Contract**

- (1) The Contract consists of the SF1442, the Agreement, the Statement of Work, Specifications, Drawings, Exhibits, Amendments, Modifications, and other Attachments identified herein (collectively, the Contract Documents). The Contract contains the entire agreement of the Parties, and no prior written or oral agreement, express or implied, shall be admissible to contradict or modify any part of the Contract.
- (2) The Construction Documents, as that term is defined in this Agreement, shall be deemed incorporated into the Contract Documents upon acceptance of all deliverables described in the Design Phase Services Statement of Work, and shall supersede and replace all Specifications and Drawings contained in the Contract Documents at award of the Contract.
- (3) In consideration for, and upon condition of, the Contractor's completion of the Design Phase Services, GSA shall pay the Contractor the firm-fixed-price for Design Phase Services, subject to the terms and conditions set forth in this Contract. If the GMP Option is exercised, then the Contractor shall be required to complete the Construction Services. In consideration for completion of the Construction Services under the GMP Option, the Contractor shall be entitled to the allowable cost of performance not to exceed the GMP, subject to the terms and conditions set forth in this Contract.
- (4) The construction work includes all construction work on the project, including the Work performed under the GMP Option, any firm-fixed-price options, or any Contract modifications for construction work. Any construction work performed under this Contract includes all labor, materials, equipment, tools, water, heat, utilities, transportation, and other facilities and services



necessary for the proper execution of the construction work described in and reasonably inferable from the Contract Documents, whether temporary or permanent.

### **I.C. Period of Performance**

#### **(1) Design Phase Services**

(a) *Commencement of Design Phase Services.* The Contractor shall commence performance of the Design Phase Services within 21 days after the Contractor receives the Notice to Proceed (NTP).

(b) *Completion of Design Phase Services.* Design Phase Services shall be complete upon acceptance of all deliverables required by the Design Phase Services Statement of Work.

#### **(2) Construction Services (the Work)**

(a) *Commencement of the Work.* If the Government exercises the GMP Option, the Contractor shall commence performance of the construction within 30 days after the Contractor receives the Notice to Proceed (NTP) for the Work.

(b) *Substantial Completion Phase 1.* If the Government exercises the GMP Options, the Contractor shall achieve Substantial Completion of the Construction Phase Work, as that term is defined in this Agreement, no later than 540 calendar days from issuance of Notice to Proceed (NTP)) for the Work.

(c) *Substantial Completion Phase 2.* If the Government exercises the GMP Options, the Contractor shall achieve Substantial Completion of the Construction Phase Work, as that term is defined in this Agreement, no later than 1,136 calendar days from issuance of Notice to Proceed (NTP)) for the Work.

(3) *Contract Completion.-Construction Services.* If the Government exercises the GMP Option, the Contractor shall achieve Contract Completion, as the term is defined in this Agreement, within 120 calendar days of Substantial Completion.

### **I.D. Work Conditions/Site Requirements**

See Statement of Work and all attachments.

### **I.E. Authorized Representatives**

(1) This Contract is between the United States of America, acting by and through the Administrator of General Services (GSA), and the Contractor (the Parties). References in this Contract to "the Owner" or "the Government" shall be understood to refer to GSA. The following individual is designated as the only authorized GSA representative under this Contract, unless other warranted contracting officers are designated in writing:

Authorized Representative Information:	
Contracting Officer's Information	
Name:	Sebastian Asaro
Address:	One World Trade Center, New York, NY 10007
Telephone:	646-398-0455
Email:	sebastian.asaro@gsa.gov

(2) GSAR 552.236-71, Authorities and Limitations, is incorporated by reference in this Contract.

#### **I.F. Contract Liquidated Damages Rate**

In accordance with "Liquidated Damages" clause in Section III (Terms and Conditions), liquidated damages shall be calculated at the rate of \$6,000.00 per calendar day.

#### **I.G. Buy American Exceptions**

For the applicable Buy American clause and any exceptions, see Section IV of this Agreement.

#### **I.H. Statement of Work, Specifications, Drawings, Exhibits, and Other Attachments**

The following documents are incorporated by reference into this Contract.

- (1) Statement of Work, Dated 2 November 2018

## **II. Prices**

### **II.A. Basis of Pricing**

(1) *Contract Prices.* All Contract prices set forth in this Section include all costs, including, but not limited to the cost of work performed by subcontractors and consultants, indirect costs, fees, expenses, taxes, and profit, necessary to complete the Design Phase Services (Base Contract), and firm-fixed-price options for construction work, if any, in accordance with the Contract Documents. For pricing information regarding the GMP Option, see Paragraph IV.A., *Construction Manager as Constructor (CMc) Guaranteed Maximum Price with CMc Contingency Allowance and Shared Savings.*

(2) *Knowledge of Conditions Affecting Price.* FAR 52.236-3, Site Investigations and Conditions Affecting the Work, is incorporated by reference in this Contract. The Contractor is presumed to have established all prices with knowledge of general and local conditions that may affect the cost of Contract performance at the site where the Work is to be performed, to the extent that such information is reasonably obtainable.

(3) *Unit Prices and Allowances.* If any portion of the construction work is to be performed on a unit price basis (Unit Priced Work), the unit price established in the Contract shall include all costs of coordinating and incorporating the Unit Price Work into the construction work. The Contractor shall only be obligated to perform Unit Priced Work to the extent that an allowance has been established in an amount sufficient to compensate the Contractor for such Unit Priced Work at the established unit prices. The Contractor shall be obligated to perform such work in excess of a unit quantity for which an Allowance is sufficient only if directed by the Contracting Officer in writing. The Contractor shall be bound to the unit price or prices set forth herein in all equitable adjustments for changes including unit priced work, and no markups shall be applied to such unit prices.

(4) *Firm-fixed-price Options.* If any portion of the construction work is to be performed upon the timely exercise of a firm-fixed-price option, the option price shall include all costs of coordinating and incorporating such work into the remaining construction work. An adjustment to the Contract price for such additional work shall be computed solely on the basis of the option price or prices set forth herein.

(5) *Work Packages.* The Contractor and the Government may agree to develop firm-fixed-price early work packages for construction work that stand alone from the remainder of the Work. The Parties must agree bilaterally to the scope, schedule and pricing for any such work package, and Contract must be modified accordingly. If such work package reduces the scope of the Construction Services under the GMP Option, the Estimated Cost of the Work (ECW) shall be reduced, and the CMc Contingency Allowance (CCA), Fee and GMP shall be adjusted accordingly. These early work packages become definitive firm-fixed-price line items in the Contract, and they shall include specific completion milestones.

(6) *Bid Rates.* If this Contract includes Bid Rates to be used in determination of equitable adjustments (e.g., overhead, profit, daily rates for time-related costs), such rates shall be deemed to include all costs recoverable as components of an equitable adjustment consistent with the requirements, definitions, and exclusions applicable to equitable adjustments set forth in this Contract, and consistent with the Contractor's cost accounting practices. Unless otherwise specified, the bid rates shall be deemed to include only the Contractor's costs, and not the costs of any subcontractors.

(7) *Shared Savings.* The Contractor shall be entitled to 50% of any Shared Savings (see *Paragraph IV.A., Construction Manager as Constructor (CMc) Guaranteed Maximum Price with CMc Contingency Allowance and Shared Savings.*

## **II.B. Contract Price Form**

<b>Base Scope Offer</b>	<b>Value</b>
Design Phase Work	\$495,000.00

<b>Estimated Cost of Work (ECW)</b>	<b>VALUE</b>
Option 1- Broadway Plaza Reconstruction (All demolition costs should be carried in Option 1)	(b) (4)
Option 2 - Early Demolition Package	(b) (4)
Option 4 - Roof Replacement	(b) (4)
<b>SUB TOTAL - ECW</b>	<b>(b) (4)</b>
<b>CMc Contingency Allowance (CCA)</b>	<b>VALUE</b>
CMc Contingency Allowance Percentage	%
CMc Contingency Allowance (ECW x 3%)	(b) (4)
<b>Fees</b>	<b>VALUE</b>
Overhead	(b) (4)
Profit	(b) (4)
General Conditions	(b) (4)
<b>SUB TOTAL - Fees</b>	<b>(b) (4)</b>
<b>Guaranteed Maximum Price</b>	<b>VALUE</b>
Guaranteed Maximum Price (ECW + CCA + Fees)	(b) (4)
<b>Total Evaluated Price (Base Scope Price + GMP)</b>	<b>(b) (4)</b>

### III. Terms and Conditions

#### III.A. Definitions

- (1) "Design Phase" means the phase of the Project during which the design is developed and completed.
- (2) "Design Phase Services" means design phase construction management services, constructability reviews and other related services as described in the Statement of Work.
- (3) "Construction Documents" mean the 100% complete specifications and construction drawings developed during the Design Phase.
- (4) "Work" means the Construction Services under the GMP Option

#### III.B. Contractor Responsibilities

- (1) During the Design Phase Services, it is the Contractor's responsibility to familiarize itself with all design information (e.g., draft specifications, drawings, etc.) provided for its review. The

Contractor shall be responsible for satisfying itself that the Project as described in the design information is constructible using commercially practicable means and methods; that the construction work is described in the design documents with sufficient completeness to enable pricing of a complete Project within the GMP; and that the manner of presentation and organization of information in the design documents enables accurate estimation of the Cost of the Work. Prior to establishment of the final ECW, the Contractor shall bring to the Contracting Officer's attention all instances that it has discovered or has been made aware of where omission of design information affects the Contractor's ability to accurately estimate the Cost of the Work.

(2) The Contractor is responsible for performing the Design Phase Services in accordance with the Statement of Work, and the Contractor shall submit to the Contracting Officer all deliverables and reports in accordance with the Statement of Work.

(3) The Contracting Officer has sole discretion to accept or reject all or part of any proposal by the Contractor related to design.

(4) Within 30 days after award, the Contractor shall provide a schedule for the Design Phase Services in Gantt chart format indicating tasks and milestones for deliverables.

(5) Commencement, Prosecution, and Completion of Work

FAR 52-211-10, Commencement, Prosecution, and Completion of Work, is supplemented as follows:

Upon exercise of the GMP Option or issuance of a modification commencing construction work, the Contractor shall not commence performance until the Contracting Officer has issued NTP for the Work. The Contractor shall diligently prosecute the construction work so as to achieve Substantial Completion within the time specified in Paragraph I.C. of the Agreement. If this Contract specifies different completion dates for different phases or portions of the construction work, the Contractor shall diligently prosecute the Work so as to achieve Substantial Completion of such phases or portions of the Work within the times specified.

(6) For the purposes of FAR 52.236-1, Performance of Work by the Contractor, the Contractor shall perform at least 12 percent of the construction work. The Contractor shall furnish the Contracting Officer within 10 days after the award of the construction option, a letter outlining the items of work he will perform with his own forces

(7) Unless otherwise expressly stated in the Contract, the Contractor shall be responsible for all means and methods employed in the performance of the Contract.

(8) The Contractor shall be responsible for coordinating all activities of subcontractors. This responsibility includes coordination of: preparation of shop drawings produced by different subcontractors where their work interfaces or may potentially conflict or interfere and the installation of such work; scheduling of work by subcontractors; and use of the Project site for staging and logistics.

(9) Where installation of separate construction work components as shown in the Contract Documents will result in conflict or interference between such components or with existing conditions, including allowable tolerances, it is the Contractor's responsibility to bring such conflict or interference to the attention of the Contracting Officer and seek direction before fabrication, construction, or installation of any affected construction work. If the Contractor

fabricates, constructs, or installs any work prior to receiving such direction, the Contractor shall be responsible for all cost and time incurred to resolve or mitigate such conflict or interference.

(10) The Contractor must submit a project specific safety plan before commencing construction work.

(11) Where Drawings show construction work without specific routing, dimensions, locations, or position relative to other work or existing conditions, and such information is not specifically defined by reference to Specifications or other information supplied in the Contract Documents, the Contractor is responsible for routing, dimensioning, and locating such work in coordination with other work or existing conditions in a manner consistent with Contract requirements.

(12) It is not the Contractor's responsibility to ensure that the Contract Documents comply with applicable laws, statutes, building codes and regulations. If it comes to the attention of the Contractor that any of the Contract Documents do not comply with such requirements, the Contractor shall promptly notify the Contracting Officer in writing. If the Contractor performs any of the construction work prior to notifying and receiving direction from the Contracting Officer, the Contractor shall assume full responsibility for correction of such work, and any fees or penalties that may be assessed for non-compliance.

(13) The Contractor shall immediately bring to the Contracting Officer's attention any hazardous materials or conditions not disclosed in the Contract Documents discovered by or made known to the Contractor during the performance of the Contract

(14) The Contractor shall be liable to the Government in accordance with applicable law for all damages to the Government caused by the Contractor's negligent performance of services furnished under this Contract. Neither the Government's review or acceptance of, nor payment for, the design services required under this Contract shall be construed as a waiver of any rights under this Contract or of any cause of action arising out of the performance of this Contract.

### **III.C. Contractor Management and Personnel**

(1) The Contractor shall designate a principal of the firm or other senior management official to provide executive oversight and problem resolution resources to the Project for the entire life of the Contract, including the GMP Option.

(2) FAR 52.236-6, Superintendence by the Contractor, is supplemented as follows:

(a) The Contractor shall employ sufficient management and contract administration resources, including personnel responsible for project management, field superintendence, change order administration, estimating, coordination, inspection, and quality control, to ensure the proper execution and timely completion of the construction work.

(b) The Contractor shall employ, and require its subcontractors to employ, qualified personnel to perform the construction work. The Government reserves the right, at no additional cost to the Government, to exclude, or remove from the site or building, any personnel for reasons of incompetence, carelessness, or insubordination, who violate rules and regulations concerning conduct on federal property, or whose continued employment on the site is otherwise deemed by the Government to be contrary to the public interest.

(c) Repeated failure or excessive delay by the Contractor to provide qualified personnel shall be deemed a default for the purposes of the Termination for Default clause.

### **III.D. Project Schedule**

(1) The Contractor shall develop a Design Phase Project Schedule to plan, coordinate, and perform the services during the design phase. This schedule shall be produced using widely used, commercially available computer software such as Microsoft Project,®. The schedule will be coordinated with the Architect's schedule of design submissions and show milestones for completion of Design Reviews and cost reconciliation. It will also include a milestone for establishing the ECW for the construction option.

(2) Within 60 days after establishing the final ECW, the Contractor shall submit its Project Schedule to the Contracting Officer, together with a written narrative describing the major work activities, activities on the critical path, and major constraints underlying the sequence and logic of the Project Schedule.

The Contractor shall use a Critical Path Method ("CPM") Construction Project Schedule to plan, coordinate, and perform the Work under the GMP Option. The Construction Project Schedule shall be produced using widely used, commercially available computer software that is capable of generating and monitoring a CPM schedule and is compatible with Meridian Proliance.® For example, compatible software includes Microsoft Project,® Primavera P6. The contractor shall submit the Project Schedule both electronic and hardcopy print format.

### **III.E. Extensions of Time**

FAR 52.211-13, Time Extensions, is supplemented as follows:

(1) If the Contractor requests an extension of the time for Substantial Completion, the Contractor shall base its request on analysis of time impact using the Project Schedule as its baseline, and the new Substantial Completion date projected by the Project Schedule as revised to account for the impact. The Contractor's request must be submitted to the Contracting Officer in writing, and set forth facts and analysis in sufficient detail to enable the Contracting Officer to evaluate the Contractor's entitlement to an extension of time.

(2) The Contractor shall only be entitled to an extension of time to the extent that Substantial Completion of the Work is delayed by causes for which the Contractor is not responsible under this Contract and to the extent that the actual or projected Substantial Completion date is later than the date required by this Contract for Substantial Completion.

(3) The Contractor shall not be entitled to an extension of time if the Contractor has not updated the Project Schedule in accordance with this Contract.

(4) The Government shall not be liable for any costs, incurred by the Contractor, to mitigate time impacts that occur within 30 calendar days after the date the Contractor submits a request for extension of time complying with this clause.

### **III.F. Interpretation of Specifications and Drawings**

FAR 52.236-21, Specifications and Drawings for Construction, and GSAR 552.236-77, Specifications and Drawings, are supplemented as follows:

(1) For the purposes of FAR 52.236-21, GSAR 552.236-77 and this section ("Interpretation of Specifications and Drawings"), specifications and drawings refer only to the Construction Documents.

(2) Different requirements within the Contract Documents shall be deemed inconsistent only if compliance with both cannot be achieved.

(3) Unless otherwise noted, the drawings shall be interpreted to provide for a complete construction, assembly, or installation of the Work, without regard to the detail with which material components are shown in the drawings.

### **III.G. Submittals**

FAR 52.236-21, Specifications and Drawings for Construction, GSAR 552.236-78, Shop Drawings, Coordination Drawings, and Schedules, and GSAR 552.236-79, Samples are supplemented as follows:

(1) During performance of the construction work, the Contractor shall prepare and submit to the Contracting Officer shop drawings, samples, calculations, product information, mockups, and other submittals (collectively, "submittals") demonstrating compliance with Contract requirements for all work components as specified elsewhere in this Contract. If particular submittal requirements are not specified for a component of the work, the Contractor shall prepare submittals for such work as directed by the Contracting Officer.

(2) The Contractor shall not proceed with construction work or procure products or materials described or shown in submittals until the Contracting Officer has indicated approval of the submittal. Any work or activity undertaken prior to approval shall be at the Contractor's risk; should the Contracting Officer subsequently determine that the work or activity does not comply with the Contract, the Contractor shall be responsible for all cost and time required to comply with the Contracting Officer's determination. The Contracting Officer shall have the right to order the Contractor to cease execution of construction work for which submittals have not been approved. The Government shall not be liable for any cost or delay incurred by the Contractor attributable to the proper exercise of this right.

(3) The Contractor shall be entitled to receive notice of action on submittals within a reasonable time, given the volume or complexity of the submittals and the criticality of the affected activities to Substantial Completion as may be indicated in the Project Schedule; provided, that the Contractor shall not be entitled to receive notice of action on submittals containing variations from Contract requirements in less than twenty (20) business days.

### **III.H. Substantial Completion and Contract Completion**

FAR 52.211-10, Commencement, Prosecution, and Completion of Work, FAR 52.211-12, Liquidated Damages (Construction), and GSAR 552.246-72, Final Inspection and Tests, are supplemented as follows:

(1) For the purposes of FAR 52.211-10, Commencement, Prosecution and Completion of Work, and FAR 52.211-12, Liquidated Damages (Construction) the "Work" is the Work under the GMP Option. The Work shall be deemed complete when it is "Substantially Complete." For phased construction, each phase is subject to a separate Substantial Completion date, as established in this Contract. The Work shall be deemed "Substantially Complete" if and only if the Contractor has completed the Work and related Contract obligations in accordance with the Contract Documents, such that the Government may enjoy the intended access, occupancy, possession, and use of the entire Work without impairment due to incomplete or deficient work, and without interference from the Contractor's completion of remaining work or correction of



deficiencies in completed work. In no event shall the Work be deemed Substantially Complete if all fire and life safety systems are not tested and accepted by GSA, where such acceptance is required under the Contract.

(2) With reasonable advance notice, the Contractor shall submit to the Contracting Officer a written proposal recommending a Substantial Completion date (Notice of Substantial Completion). The Contracting Officer shall conduct inspections and make a determination of Substantial Completion within a reasonable time. If the Contracting Officer takes exception to the Notice of Substantial Completion, the Contractor shall be entitled to a written notice of conditions precluding determination of Substantial Completion.

(3) The Contractor shall only be entitled to an extension of time to address such conditions if, and to the extent that, the Contracting Officer provides notice of such conditions more than thirty (30) calendar days after receipt of the Notice of Substantial Completion.

(4) Substantial Completion shall be established by the Contracting Officer's issuance of a written determination specifying the date upon which the Work is Substantially Complete.

(5) The Contract is complete (Contract Completion) if and only if the Contractor has completed all Work and related Contract obligations, corrected all deficiencies and all punch list items, and complied with all conditions for final payment.

(6) The Contractor shall not be entitled to final payment or release of any retainage held by the Government until after Contract Completion. If the Contractor does not achieve Contract Completion within the time required by this Contract, the Government shall be entitled, after providing notice to the Contractor, to complete any work remaining unfinished. The Contractor shall be liable to the Government for all costs incurred by the Government to complete such work.

### **III.I. Use and Possession Prior to Substantial Completion**

FAR 52.236-11, Use and Possession Prior to Completion, is supplemented as follows:

Exercise by the Government of the right conferred by FAR 52.236-11 shall not relieve the Contractor of responsibility for completing any unfinished components of the Work.

### **III.J. Finality of Contract Modifications**

It is the Contractor's duty to include in proposals for equitable adjustment or other consideration all compensation to which it may be entitled, including cost and time. Unless otherwise explicitly stated in a modification to the Contract providing for such an adjustment, adjustments to the ECW or GMP or period of performance agreed upon therein shall be deemed to provide all adjustment to which the Contractor is entitled, and shall constitute final settlement of the Contractor's entitlement to adjustment on account of the change or other condition giving rise to the modification.

### **III.K. Liquidated Damages**

FAR 52.211-12, Liquidated Damages is supplemented as follows:

- (1) The Contractor acknowledges that time is of the essence for the performance of the Work, and that determining actual damages from delay would be extremely difficult and impractical. If the Contractor fails to achieve Substantial Completion of the Work within the time specified in this Contract, the Contractor shall be liable to the Government for liquidated damages at the rate specified in Section I (Project Information), paragraph entitled, "*Liquidated Damages Rate*," for each calendar day following the required completion date that the Work is not Substantially Complete.
- (2) If the Contract requires different completion dates for different phases or portions of the Work, the Contractor shall be liable for liquidated damages at the specified rate for each calendar day following the required completion date that the phase or portion of Work is not Substantially Complete. If a single rate is specified, the specified rate shall be apportioned between the different phases or portions of the Work.
- (3) If the Government elects to accept any portion of the Work not specifically designated as a phase or portion of Work with its own required completion date, the liquidated damage rate shall be apportioned between accepted work and uncompleted work, and the Contractor's liability for liquidated damages shall be computed accordingly.

### **III.L. Insurance Requirements**

(1) The Contractor shall obtain and maintain for the entire life of the Contract, in addition to any insurance required by law, the following minimum kinds and amounts of insurance required pursuant to FAR clause 52.228-5, Insurance – Work on a Government Installation, and GSAR 552.228-5, Government as Additional Insured.

(a) Workers' compensation insurance in the amount required by the jurisdiction in which the Contract is performed. The Contractor shall obtain Employers' liability coverage of at least \$2,000,000. If occupational diseases are not covered by workers' compensation insurance, Employers' liability coverage shall include occupational diseases.

(b) Broad form comprehensive commercial general liability insurance in the amount of at least \$5,000,000 per occurrence. Such insurance shall include, but not be limited to, contractual liability, bodily injury and property damage.

(c) Comprehensive automobile liability covering the operation of all automobiles used in connection with performing the Contract in the amount of at least \$1,000,000 per person and \$2,500,000 per occurrence for bodily injury and \$1,000,000 per occurrence for property damage.

(2) The Contractor shall promptly provide to the Contracting Officer proof that it has obtained insurance required by the Contract in the form of certificates of insurance. The Contractor shall submit to the Contracting Officer all renewal certificates issued during the life of this Contract immediately upon issuance.

### **III.M. Performance and Payment Bonds**

FAR 52.228-15, Performance and Payment Bonds – Construction, is supplemented as follows:

- (1) "Original Contract Price" means the GMP established at award of this Contract.
- (2) The Contractor shall furnish required performance and payment bonds within 14 days of exercise of the GMP Option.

(3) Receipt by the Government of required performance and payment bonds is a condition precedent to issuance of the NTP.

### **III.N. Order of Precedence**

Different requirements within this Contract shall be deemed inconsistent only if compliance with both cannot be achieved. In case of inconsistency between Contract Documents, the following order of precedence shall apply:

- (1) Section IV of the Agreement
- (2) Sections I, II, and III of the Agreement
- (3) The Statement of Work
- (4) The Specifications
- (5) The Drawings
- (6) Exhibits and Other Attachments

### **III.O. Administrative Matters**

(1) *Project Meetings.* The Contractor shall attend and participate in regularly scheduled Project meetings.

(2) *Design Phase Services Payments.* Within 30 days of award, the CMc will submit a payment schedule for design phase services which reflect the design reviews and various deliverables in the Design Phase schedule for approval. Progress Payments during the design phase will be based on the approved schedule.

(3) *Schedule of Values.* Within 60 days after the Contract is modified to incorporate a final ECW, and in addition to any other requirements set forth in the Contract Documents (e.g., cost loaded schedule), the Contractor shall prepare and submit for approval a Schedule of Values, which shall be derived from the cost loaded schedule. The Contractor may bundle individual cost loaded schedule activities to simplify major work activities. The Contractor shall establish a separate value for bonds, mobilization, insurance, and as otherwise approved by the Contracting Officer. The schedule of values must be reconciled monthly with the open books for actual costs allocated.

(4) *Payments.* The Government shall make progress payments based upon the Design Phase Services Payment Plan and the Schedule of Values for the Work, as applicable. All payments will be credited to the Government in the establishment of the Final Settlement. Requirements for invoices are supplemented as follows:

(a) Before submitting a request for payment, the Contractor shall attend pre-invoice payment meetings each month, as scheduled, with the designated Government representative for the purpose of facilitating review and approval of payment requests. Payment meetings may be conducted in person or by telephone. The Contractor shall provide documentation to support the prospective payment request.

(b) The Contractor shall submit its invoices to the Contracting Officer. Separate payment requests shall be submitted for progress payments, payments of retainage, and partial or final payments.

(c) If the invoice does not meet the requirements of FAR Clause 52.232-27 (a)(2) and the requirements-specified in Subparagraphs (4)(a),(d),(e), and (f) of this *Payments* provision, or the requirements for a Critical Path Method (CPM) Project Schedule, the Contracting Officer may return the invoice to the Contractor without payment for correction. If the Contracting Officer disputes the requested payment amount, the Government may pay the portion of the requested payment that is undisputed.

(d) Invoices shall be submitted in an original and two (2) copies to the designated billing office specified in this Contract or in individual delivery/work orders.

(e) Invoices must include the Account Document Number (ADN) assigned at award.

(f) The Contractor shall submit the following information or documentation with each invoice:

(i) For construction payments, GSA Form 184 - Construction Progress Report (construction work Only) or AIA Form G702, including the updated Schedule of Values upon which the payment request is based;

(ii) For construction payments, GSA Form 2419 - Certification of Progress Payments Under Fixed-Price Construction Contract;

(iii) For other payments including design phase payments, the invoice must identify deliverables and services rendered for that progress payment in accordance with the contract;

(iv) The payment terms that apply for the particular services rendered;

(v) CPM Project schedule that complies with the Contract Documents

(vi) Additional documentation as may be requested by the Contracting Officer.

(g) GSA will not be obligated to issue final payment unless the Contractor has furnished to the Contracting Officer a release of claims against the Government relating to this Contract, and submitted all required product warranties, as-built drawings, operating manuals, and other items as specified in the Contract. The Contractor may reserve from the release specific claims only if such claims are explicitly identified with stated claim amounts. All release forms must bear the original signature of the signer and must be affixed with the Contractor's corporate seal or the seal of a Notary Public.

(5) *Prompt Payment.* In accordance with FAR clause 52.232-27, the period for payments is as follows:

(a) Progress Payments: 14 days

(b) Subsequent Subcontractor Payments: 7 days

(6) *Payment Information.* The General Services Administration (GSA) makes information on contract payments available electronically at <http://www.finance.gsa.gov>. The Contractor may register at the site and review its record of payments. This site provides information only on payments made by GSA, not by other agencies.

(7) *Security Clearances.* Contractor shall comply with the following requirements pertaining to security clearances.

(a) All personnel performing work under the Contract on the Project site must obtain an Enter on Duty (EOD) determination before they will be granted access to the site.

(b) To obtain an EOD determination, Contractor shall submit for all such personnel fingerprints on Form SF87 and a completed Contractor Information Worksheet (CIW). Detailed information is available at [GSA Access Card](#). USAccess Credentialing Centers can be located at [US Access Centers](#).

(c) In addition, all such personnel who will be on site 6 months or longer must apply for and receive clearance in accordance with Homeland Security Presidential Directive 12 (HSPD-12). See Section IV, *Contract Clauses*, GSAR 552.204-9.

(8) *Safeguarding and Dissemination of Sensitive But Unclassified (SBU) Building Information*. This clause applies to all recipients of SBU building information, including offerors, bidders, awardees, contractors, subcontractors, lessors, suppliers and manufacturers.

(a) Marking SBU. Contractor-generated documents that contain building information must be reviewed by GSA to identify any SBU content, before the original or any copies are disseminated to any other parties. If SBU content is identified, the Contracting Officer (CO) may direct the contractor, as specified elsewhere in this contract, to imprint or affix SBU document markings to the original documents and all copies, before any dissemination.

(b) Authorized recipients.

(i) Building information designated SBU must be protected with access strictly controlled and limited to those individuals having a legitimate business need to know such information. Those with a need to know may include Federal, State and local government entities, and nongovernment entities engaged in the conduct of business on behalf of or with GSA. Nongovernment entities may include architects, engineers, consultants, contractors, subcontractors, suppliers, utilities, and others submitting an offer or bid to GSA, or performing work under a GSA contract or subcontract. Recipient contractors must be registered as "active" in the System for Award Management (SAM) database at [www.sam.gov](http://www.sam.gov) and have a legitimate business need to know such information. If a subcontractor is not registered in the SAM and has a need to possess SBU building information, the subcontractor shall provide to the contractor its DUNS number or its tax ID number and a copy of its business license. The contractor shall keep this information related to the subcontractor for the duration of the contract and subcontract.

(ii) All GSA personnel and Contractors must be provided SBU building information when needed for the performance of official Federal, State, and local government functions, such as for code compliance reviews and for the issuance of building permits. Public safety entities such as fire and utility departments may require access to SBU building information on a need to know basis. This clause must not prevent or encumber the dissemination of SBU building information to public safety entities.

c. Dissemination of SBU building information:

(i) By electronic transmission. Electronic transmission of SBU information outside of the GSA network must use session encryption (or alternatively, file encryption). Encryption must be via an approved NIST algorithm with a valid certification, such as Advanced Encryption Standard (AES) or Triple Data Encryption Standard (3DES), in accordance with Federal Information Processing Standards Publication (FIPS PUB) 140-2, Security Requirements for Cryptographic Modules per GSA policy.

(ii) By nonelectronic form or on portable electronic data storage devices. Portable electronic data storage devices include, but are not limited to CDs, DVDs, and USB drives.

Nonelectronic forms of SBU building information include paper documents, among other formats.

1) By mail. Contractors must utilize only methods of shipping that provide services for monitoring receipt such as track and confirm, proof of delivery, signature confirmation, or return receipt.

2) In person. Contractors must provide SBU building information only to authorized recipients with a need to know such information. Further information on authorized recipients is found in Section 2 of this clause.

d. Record keeping. Contractors must maintain a list of all entities to which SBU is disseminated, in accordance with sections 2 and 3 of this clause. This list must include at a minimum: (1) the name of the State, Federal, or local government entity, utility, or firm to which SBU has been disseminated; (2) the name of the individual at the entity or firm who is responsible for protecting the SBU building information, with access strictly controlled and limited to those individuals having a legitimate business need to know such information; (3) contact information for the named individual; and (4) a description of the SBU building information provided. Once "as built" drawings are submitted, the contractor must collect all lists maintained in accordance with this clause, including those maintained by any subcontractors and/or suppliers, and submit them to the CO. For Federal buildings, final payment may be withheld until the lists are received.

e. Safeguarding SBU documents. SBU building information (both electronic and paper formats) must be protected, with access strictly controlled and limited to those individuals having a legitimate business need to know such information. GSA contractors and subcontractors must not take SBU building information outside of GSA or their own facilities or network, except as necessary for the performance of that contract. Access to the information must be limited to those with a legitimate business need to know.

f. Destroying SBU building information. When no longer needed, SBU building information must be destroyed so that marked information is rendered unreadable and incapable of being restored, in accordance with guidelines provided for media sanitization within GSA CIO IT Security 06-32, Media Sanitization Guide and Appendix A of NIST Special Publication 800-88, Guidelines for Media Sanitization. Alternatively, SBU building information may be returned to the CO.

g. Notice of disposal. The contractor must notify the CO that all SBU building information has been returned or destroyed by the contractor and its subcontractors or suppliers in accordance with paragraphs 4 and 6 of this clause, with the exception of the contractor's record copy. This notice must be submitted to the CO at the completion of the contract to receive final payment. For leases, this notice must be submitted to the CO at the completion of the lease term. The contractor may return the SBU documents to the CO rather than destroying them.

h. Incidents. All improper disclosures of SBU building information must be immediately reported to the CO at <insert address and contact information> . If the contract provides for progress payments, the CO may withhold approval of progress payments until the contractor provides a corrective action plan explaining how the contractor will prevent future improper disclosures of SBU building information. Progress payments may also be withheld for failure to comply with any provision in this clause until the contractor provides a corrective action plan explaining how the contractor will rectify any noncompliance and comply with the clause in the future.

i. Subcontracts. The contractor and subcontractors must insert the substance of this clause in all subcontracts.

### **III.P. Non-Compliance with Contract Requirements**

In the event the Contractor, after receiving written notice from the Contracting Officer of non-compliance with any requirement of this Contract, fails to initiate promptly such action as may be appropriate to comply with the specified requirement within a reasonable period of time, the Contracting Officer shall have the right to order the Contractor to stop any or all work under the Contract until the Contractor has complied or has initiated such action as may be appropriate to comply within a reasonable period of time. The Contractor will not be entitled to any extension of Contract time or payment for any costs incurred as a result of being ordered to stop work for such cause.

### **III.Q. Safeguarding Sensitive Data and Information Technology Resources**

In accordance with FAR 39.105, this section is included in the contract. This section applies to all users of sensitive data and information technology (IT) resources, including awardees, contractors, subcontractors, lessors, suppliers and manufacturers. The following GSA policies must be followed.

These policies can be found at [Directives Library](#).

1. CIO P 2100.1K GSA Information Technology (IT) Security Policy
2. CIO P 2100.2B GSA Wireless Local Area Network (LAN) Security
3. CIO 2100.3C Mandatory Information Technology (IT) Security Training Requirement for Agency and Contractor Employees with Significant Security Responsibilities
4. CIO 2104.1A CIO CHGE 1 GSA Information Technology IT General Rules of Behavior
5. CIO 2105.1 C CHGE 1 GSA Section 508: Managing Electronic and Information Technology for Individuals with Disabilities
6. CIO 2106.1 GSA Social Media Policy
7. CIO 2107.1 Implementation of the Online Resource Reservation Software
8. CIO 2160.4A Provisioning of Information Technology (IT) Devices
9. CIO 2162.1 Digital Signatures
10. CIO P 2165.2 GSA Telecommunications Policy
11. CIO P 2180.1 GSA Rules of Behavior for Handling Personally Identifiable Information (PII)
12. CIO 2182.2 Mandatory Use of Personal Identity Verification (PIV) Credentials
13. CIO P 1878.2A Conducting Privacy Impact Assessments (PIAs) in GSA
14. CIO IL-13-01 Mobile Devices and Applications
15. CIO 2102 Information Technology (IT) Integration Policy
16. HCO 9297.1 GSA Data Release Policy
17. HCO 9297.2B GSA Information Breach Notification Policy
18. ADM P 9732.1 D Suitability and Personnel Security

The contractor and subcontractors must insert the substance of this section in all subcontracts.

### **III.R. Apprenticeship Plans**

(1) Within 30 days following the exercise of the GMP Option, the Contractor shall furnish the Contracting Officer with an Apprenticeship Plan. The plan shall include the following:

(a) Trades to be subcontracted and those to be self performed. Indicate if a trade is to be performed using approved registered apprenticeship programs. A registered apprenticeship program is defined as a program that is registered with the U.S. Department of Labor or a State Apprenticeship Agency, under 29 CFR Part 29.



(b) The percentage of trades (subcontractors) to be awarded using registered apprenticeship programs. (If self-performing trades, identify this information as it applies to such trades).

(c) The target number of apprentices to be employed under this Contract.

(d) New registered apprenticeship programs to be initiated as a part of this Contract.

(e) A description of the means used to recruit and employ apprentice labor under registered programs.

(f) A Training Plan that includes a complete list of specific training courses, including safety requirements, to be used by the Contractor and major trade subcontractors. Identify the number of hours and the method used to provide apprenticeship training (on the job training, classroom training, etc.). Provide the following information regarding safety training provided for supervision and craft labor employees:

(i) The amount of time (approximately) that each contractor or subcontractor devotes to safety training by craft and

(ii) The steps taken to ensure that safety training is conducted in an effective manner.

(2) During the performance of this Contract, the Contractor shall submit to the Contracting Officer a quarterly Labor/Trade Apprenticeship and Training Program Report containing the following:

(a) List of awarded subcontractors by trade

(b) Name of subcontractors with registered Apprenticeship Programs

(c) Total number of apprentices used to date on Contract

(d) New approved registered apprenticeship programs (if any) established as a result of this Contract

(e) Total number of on-the job training hours

(f) Total number of classroom training hours

(g) Brief description of effort to meet Labor/Trade Plan goals.

(3) The Contractor shall submit the reports electronically to [pbsapprentice@gsa.gov](mailto:pbsapprentice@gsa.gov) with a copy to the Contracting Officer. The report form in Microsoft® Excel electronic format will be provided upon award of the Contract.

(4) Quarterly reports are due on the 30<sup>th</sup> calendar day (or next business day) following the end of each quarter. Each quarter under this Contract will end March 31, June 30, September 30 and December 31 of each calendar year.

### **III.S. Equal Employment Opportunity Plan**

(1) Within 30 days following award, the Contractor shall furnish the Contracting Officer with an EEO Compliance Plan. The plan shall include the following:

(a) Name of contractor's EEO Manager for the contract and point of contact information. The EEO Manager is responsible for:



- (i) Monitor all employment-related activity to ensure that the Contractor's equal employment policy is being carried out;
  - (ii) Submit reports as may be required by the Government; and
  - (iii) Keep records that shall at least include for each employee the name, address, telephone number, construction trade, union affiliation (if any), employee identification number, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; *however*, to the degree that existing records satisfy this requirement, separate records are not required to be maintained.
- (a) Address how the contractor intends to include the EEO provisions of the contract in all subcontracts in excess of \$10,000.
- (b) Address what type of efforts will be used to ensure equal employment opportunity in accordance with FAR 52.222-27 Affirmative Action Compliance Requirements for Construction. Discuss organized meeting with subcontractors, labor organizations and/or other community stakeholders. Meetings should focus on increased employment opportunities, perceived problems and working to achieve the goals established. DOL representatives are available to participate in such meetings.
- (2) During the performance of this contract, the Contractor shall submit to the Contracting Officer semi-annually an EEO Compliance Report containing the following:
- (a) List of awarded subcontractors by trade, date of award and amount of subcontract. If subcontract is in excess of \$10,000, date the Deputy Assistant Secretary for Federal Contract Compliance, U.S. Department of Labor was notified of award.
  - (b) Narrative of actions taken to comply with the affirmative action procedures in paragraphs (g)(1) through (g)(16) of FAR 52.222-27.
  - (c) List participation in any voluntary associations that may assist in fulfilling the contractor's affirmative action obligations.
- Semi-annual reports are due on the 30<sup>th</sup> calendar day (or next business day) following the March 31<sup>st</sup> and September 30<sup>th</sup>.

### **III.T. Additional Terms and Conditions**

#### **Part 1 - Security Requirements and personal Identity Verification AND CREDENTIALING Procedures for contractors And SPECIFIC REQUIREMENTS (Non-Classified Contract)**

1.1 The General Services Administration (GSA) reserves the right to verify the identities of personnel with routine, unaccompanied access to GSA space, or Information Technology (IT) systems. The term Contractor used throughout this section shall refer to General/Prime Contractor, Subcontractor(s) and all their personnel. The Contractor shall comply with the GSA personal identity verification procedures outlined below, that implement Homeland Security Presidential Directive-12 (HSPD-12), Office of Management and Budget (OMB) guidance M-05-24, and the Federal Information

Processing Standards Publication (FIPS PUB) Number 201, as amended. All Contractor personnel performing work on a GSA contract may be required to have a background investigation conducted and the results favorably adjudicated (HSPD-12 compliant suitability determinations) for all contract personnel requiring routine unescorted access to Federally-controlled facilities and/or IT systems for more than 6 months before identification cards may be issued.

1.2 Based on the building type (leased or owned) and the Facility Security Level (FSL) the GSA reserves the right to conduct background checks on Contractor personnel who support GSA contracts and require routine access to GSA facilities and IT systems. . Contractors unable to obtain a favorable security determination or meet security requirements will be removed from the project and denied official access to federal facilities and IT systems.

The Government has full and complete control over granting, denying, withholding or terminating suitability determinations for Contractor personnel. The Government may authorize and grant temporary suitability to personnel of the Contractor. However, the granting of a preliminary suitability determination shall not be considered as a guarantee; that the employee will receive a favorable final suitability determination. The granting of either a preliminary or final suitability determination shall not prevent, preclude, or bar the withdrawal or termination of any such suitability determination by the Government.

Contract personnel working less than 6 months may be considered “temporary”. GSA may require low risk suitability determinations be completed for temporary contract employees, or have the option of granting unescorted access to temporary contractors based on the preliminary favorable results, a National Agency Check (NAC) consisting of NCIC and NLETS checks, an FBI fingerprint check, and a Citizenship and Immigration Services check. Short-term access based on the favorable results of a NAC for temporary access is only good for six months and cannot be extended or redone. Those requiring unescorted access greater than six months may have to undergo an HSPD-12 compliant suitability determination. Temporary contract personnel that are not required to receive a favorable suitability determination may be required to be escorted at all times while in non-public space.

1.3. The Contractor shall account for all GSA credentials issued to Contractor personnel in connection with the performance under this contract. The Contractor shall immediately return credentials issued by GSA under any of the following conditions:

- A. When the employees is no longer required for contract performance.
- B. Upon completion of the Contractor employee's employment.
- C. Upon contract completion or termination.

D. In the event a previously issued preliminary Enter on Duty (EOD) determination is revoked.

1.4. The Contracting Officer may delay final payment or execute an equitable adjustment under the contract, if the Contractor fails to comply with these requirements.

1.5. The General/Prime Contractor shall insert these requirements in all subcontracts. It shall be the responsibility of the General/Prime Contractor to return all credentials issued by the GSA and any other sources in association with this contract and in accordance with the terms set forth in paragraph 1.3, above.

## **PART 2 - FEDERAL DEBT REDUCTION AND OVERSIGHT OF FEDERAL FUNDS**

2.1 The GSA has a fiduciary responsibility to provide oversight of federal funding. The Contractor will work with the GSA to reduce expenditures, and assure oversight of federal tax dollars when requesting background checks. In order to reduce expenses and ensure prudent use of federal funds, the Contractor will make every effort to pre-screen, or interview prospective personnel to help ensure they are suitable for employment, and are able to pass a background check prior to submitting employee applications to GSA.

2.2 After the Contractor submits a request for background investigations to the GSA, the Contractor must monitor the employee's progress through completion of the process. The Contractor must provide follow-up and monitoring, ensure the requested individual(s) responds to requested information, and completes all required forms within the prescribed times allowed. The Contractor must ensure the Contracting Officer or their Designated Representative has all of the requested documentation to ensure the completion of the application. The Contractor shall assign and dedicate a single Point of Contact (POC) for the overall control, management, and oversight of all employee suitability investigation applications. This POC will be responsible for following up when requested to ensure timely and accurate document submissions for background investigations.

2.3 The Adjudicating Office reviewing the employees application may forward a written notification to contractor personnel for clarification information that pertains to the background investigation requesting additional information or supporting documentation. The POC shall ensure this inquiry is responded to in a timely manner.

## **PART 3 - ADJUDICATION AUTHORITY**

3.1 GSA and its Authorized Agent, the Office of Personnel Management (OPM) or any other named designee, will be responsible for conducting the HSPD-12 background investigations, and credentialing of Contractor's personnel. GSA has the overarching authority to process the HSPD-12 background investigations, as directed by the Office of Personnel Management (OPM).

## **PART 4 -PROCESSING OF HSPD-12 INVESTIGATIONS AND CREDENTIAL PROCEDURES**

4.1 Submission of Forms: All Contractor personnel requiring facility or IT system

access, may be responsible to fill out and complete security HSPD-12 forms and fingerprint cards prior to being allowed access. GSA will provide detailed instructions on the HSPD-12 process, the forms to be submitted, and the handling of the forms after the contract has been awarded. Depending on the level of responsiveness and timeliness of individual Contractor personnel, a maximum of seven (7) days is expected for the completion and submission of all forms by the applicant for review through the GSA. More importantly, however, the Contractor and the single Point of Contact (POC) managing all employees has the responsibility to submit applications in a timely fashion so as not to delay any project activities or the overall project schedule. Initiation of the suitability investigation forms are required to be provided for all applicants a minimum of thirty (30) days prior to access being required without the need for a HSPD-12 credential, or sixty (60) days prior to access being required when a HSPD-12 credential is required. Access requirements by Contractor personnel shall be based on the contract time performance requirements, and the planned activities on the approved project schedule. The Contracting Officer or their Designated Representative will notify the Contractor in writing if any Contractor personnel receive an unfavorable decision on their background investigation, and effective immediately; the individual will no longer be allowed to work on the project. The Contractor shall be responsible for planning and scheduling its work in such a manner as to account for the facility or IT access investigation requirement time frames. Difficulties encountered by the Contractor's personnel in gaining access when required by not fulfilling application requirements in a timely manner shall not be an excuse for Contractor non performance under the contract, or the granting of any time extensions.

Throughout the life of the contract, the Contractor shall be responsible to follow these same procedures for any new Contractor personnel, who will require access to GSA's space or IT systems.

Also throughout the life of the contract, the Contractor shall maintain a listing of current/active personnel that have received a favorable suitability investigation and/or have a credential. The Contractor shall provide the Contracting Officer or their Designated Representative, an updated listing of current/active personnel when requested. The Contractor is also responsible to show on that same list when personnel are no longer working on the project for whatever reason. The Contractor shall immediately return the credential of any individuals that are no longer requiring access.

4.2. Unsuitable Personnel: If the Contracting Officer receives an unsuitable report on any contract personnel after the processing their application, or if the GSA finds a prospective contract employee to be unsuitable or unfit for their assigned duties; the Contractor shall be advised immediately by the Contracting Officer or their Designated Representative that such personnel cannot continue to work or be assigned to work under the contract. The Contractor must then take action to remove the employee from the GSA contract.

4.3 Criteria for Eligibility: Refer to GSA Order 9732.1 or 5 CFR 731 which outlines the disqualifying and mitigating factors for personnel acceptance.

4.4 Prior Background Investigation: Contract personnel background investigations obtained through this process may be acceptable if the it can be validated equal to or higher level than required of the contract, and there is no break in service from which that favorable suitability was provided. The employee still needs to be vetted through the GSA HSPD-12 process to consider the applicant's claim to possessing an active suitability, and being granted access under this GSA contract.

4.5. Identification Credential: When GSA initiates a National Agency Check with Written Inquiries (NACI) suitability investigation and the applicant receive a favorable initial suitability Enter on Duty (EOD) determination, access to the facility or IT system is typically granted at that time. If there is a requirement that in addition, a credential is to also be issued, the Contract employee will need to enroll, and then activate that credential prior to being granted access to the facility or IT system. Credentialing requirements, when applicable, are describe later in this section.

- A. Contractor personnel with credentials shall be required to comply with all applicable access security screening procedures applicable to Government or other personnel possessing similar credentials, or as determined by the building practices as defined by the Facility Security Committee.
- B. All Contractor personnel possessing credentials (PIV or otherwise) shall visibly display their credentials at all times while in the building(s) where work is being performed.
- C. The Contractor shall be responsible for ensuring that all identification credentials are returned to the GSA when Contactor personnel are no longer employed, providing service under the contract, the contract ends or the employee preliminary access is revoked.
- D. The Contractor shall notify the GSA when credentials are lost. If the Contractor is determined to be negligent, the Contractor may be responsible for reimbursing the Government for its cost in issuing a replacement credential.

4.6 Contractor personnel may be required to submit additional personnel information to other Government Agencies affected by the contract work and based on working within that Agency's space.

## PART 5 - GSA Fingerprinting Credential Card: Contractor's travel costs

5.1. Contractor personnel who require routine access to GSA-controlled facilities and/or access to GSA IT systems must receive a preliminary favorable HSPD-12 security background investigation, before receiving a GSA credential card. Fingerprinting, however, is required for all applicants to receive an investigations. Therefore, all applicants will be required to visit a credentialing center as described below to enroll and be fingerprinted. Not all contractors, however, will receive a HSPD-12 credential and need to return for pick-up and activation of that credential.

5.2. Following a favorable HSPD-12 security background investigation, Contractor personnel may be required activate a GSA credential card at a designated location. The credential card is also a photo Identification card, which includes biometric information. The following information is provided to assist the Contractor in estimating the costs that may be associated with this requirement. The Contractor will be expected to utilize the nearest credentialing site to their offices, closest the applicant's residence or place of contract performance. The credentialing station may be a mobile station in the area, or as a fixed open station whose location(s) can be located through the following source: <http://www.fedidcard.gov/centerlocator.aspx>. Credentialing centers that are listed as "Open to all Agency personnel" are open to all customer agencies including GSA Contractors. Credentialing centers that are listed as "For use by personnel from this Agency only" mean that they are only open to personnel of that specific agency that is hosting that credentialing center. Currently a minimum of two visits to a credentialing center may be required to enroll and activate the GSA credential. The first visit is to enroll for the credential, and the second visit may be required to pick-up and activate the credential. Travel distance to a credentialing center will vary based on availability of enrollment and activation stations identified in the link above. Additional visits to a credentialing center may also be required if the card holder needs to recertify their credential certificate (every 3 years), or when the employee will need to renew their GSA credential that has expired (every 5 years). Additional visits may also be required for lost or damaged credentials needing replacement.

5.3. If a GSA credential card is required, the Contractor would be responsible for all travel and labor costs associated with fingerprinting to meet the background investigation along with the credential card enrollment and activation steps to meet HSPD-12 requirements. Travel costs may be comprised of mileage, vehicle rental, or other modes of transportation, per diem, and lodging. These costs are considered reasonable to the extent that they do not exceed, on a daily basis, the maximum rates in effect at the time of travel, as set forth in the Federal Travel Regulation, Chapter 301 – Temporary Duty (TDY) Travel Allowances, which can be accessed at the following website: <http://www.gsa.gov/fttr>. Information on Privately Owned Vehicle (POV) Mileage Reimbursement Rates can be accessed at the following website: <http://www.gsa.gov/travelpolicy>.

5.4 Any annual training requirements associated with IT access that may be required for continued use of the GSA credential is expected to be completed within a timely fashion. Otherwise, the employee's access may be revoked and the credential taken away.

## PART 6 – GENERAL EMPLOYEE CONDUCT

6.1 Standards of Conduct: The Contractor shall be responsible for maintaining satisfactory standards of employee competency, conduct, appearance, and integrity and shall be responsible for taking such disciplinary action with respect to its employees as may be necessary.

## 6.2 Removal from Contract Work:

As provided in the GSAR clause at 552.237-71, entitled "Qualifications of Employees", the contracting officer or a designated representative may require the Contractor to remove any employee(s) from GSA controlled buildings or other real property under Government control, should it be determined that the individual(s) is either unsuitable for security reasons or otherwise unfit to work on GSA controlled property. This shall include, but not be limited to, instances where an employee is determined, in the Government's sole discretion, to be incompetent, careless, insubordinate, unsuitable or otherwise objectionable.

A contractor employee may also be removed where the continued employment of the contractor employee in connection with the Government work is deemed, in the Government's sole discretion, contrary to the public interest, inconsistent with the best interests of security, or a potential threat to the health, safety, security, general well being or operational mission of the facility and its population.

Where a contractor employee is granted a preliminary suitability determination, and an unfavorable final suitability determination is later rendered, the Government may insist on the contractor employee's removal from the work site and from other work in connection with the Contract.

The Contractor shall be responsible for providing replacement employees in cases where contract employees are removed at no additional cost to the Government.

## A. GENERAL INDUSTRY SAFETY AND HEALTH STANDARDS.

The Department of Labor OSHA requires that all contractors involved in construction on Government owned or leased property comply with the Incorporation of General Industry Safety and Health Standards applicable to Construction Work and Technical Amendments, Final Rule 29 CFR Parts 1910 and 1926 as published in the Federal Register Volume 58, No. 124, June 30, 1993.

In addition, any Contractor that performs construction type work on any GSA project as defined by the Scope of the referenced regulation is required to (1) provide and maintain his own protective equipment and devices, etc; and (2) require all subcontractors used on site to follow these same provisions in the regulation.

## B. SAVE HARMLESS AND INDEMNITY AGREEMENT.

The Contractor shall save and keep harmless and indemnify the Government against any and all liability claims, and cost of whatsoever kind and nature of injury to or death of any person or persons and for loss or damage to any property (Government or otherwise) occurring in connection with or in any way incident to or arising out of the occupancy, use, service, operations, or performance of work in connection with this contract, or in connection with his selling or offering to sell construction materials on the site, resulting in whole or in part from the negligent acts or fault of Contractor, any subcontractor, or any employee, agent, or representative of Contractor or any subcontractor.

C. The following information supplements III.A.12, Insurance Requirements if hazardous materials are removed, transported or disposed of as part of this contract:

#### POLLUTION LIABILITY INSURANCE.

Hazardous Material shall mean any hazardous or toxic substance or waste as defined in any environmental law, regulation, rule, ordinance, by-law, order or determination of any governmental or judicial authority at the federal, state, or local level applicable to the relevant site. It includes, but is not limited to, any petroleum or petroleum product, asbestos, polychlorinated biphenyls (PCB's), contaminated equipment, and underground and aboveground storage tanks and the contents thereof.

The contractor shall provide to GSA the scheduled insurance coverage described below, without exclusion, for liabilities arising out of the removal and transportation of hazardous materials. All insurance shall be provided to GSA by the contractor or its subcontractor performing the work and name GSA as an additional insured and certificate holder.

The coverage shall be a minimum of \$1,000,000.00 per occurrence for all projects. If the contractor provides sufficient written proof to the Contracting Officer that occurrence coverage is not available from the insurance industry for the required coverage but is available on a claims made basis, then such coverage shall begin on the date of the contract award and shall survive for a minimum of three (3) years following the date that the last of any hazardous materials were removed, transported, disposed of and/or deposited at an appropriate EPA licensed facility. If insurance is available from the insurance industry on an occurrence basis, coverage shall survive the period of performance of this contract and beyond until such time as is reasonable that a claim might arise out of the work performed, such period of time being no less than seven (7) years. Additionally, all insurance coverage shall survive until all hazardous materials are disposed of in an ultimate EPA licensed disposal facility, including an incinerator, and until all federal, state and local environmental requirements have been complied with, whether such compliance is the obligation of the contractor, its subcontractor, GSA or other third parties. All disposal facilities shall provide GSA written evidence that they are licensed EPA disposal facilities and that they maintain pollution liability insurance of not less than \$1,000,000.00, which covers all claims arising from the disposal facilities' handling and storage of the hazardous materials. Pollution liability insurance for the transportation of the hazardous material may be carried by the transporter with limits not less than \$1,000,000.00 per occurrence and, unless otherwise waived in writing by the Contracting Officer, shall name GSA and the contractor as additional insured.

#### D. Standard of Conduct:

Contractor and contractor's representatives shall demonstrate a cooperative, positive, welcoming, respectful, professional, and businesslike demeanor and shall present a neat, job-appropriate (professional) appearance.

#### E. Photography Services



## PROFESSIONAL PHOTOGRAPHY

### Professional Photography Services for Prospectus-Scale Projects

#### BEFORE IMAGES:

A minimum of 15, a maximum of 25 color photographs taken by a professional photographer before the start of construction. Views will include exterior, as well as interior where applicable, and will be taken when daylight is bright and sunny. All photographs should be produced with such artistic skill as to be suitable, in GSA's opinion, for exhibition purposes. Deliver to GSA two full sets of 8"x10" color prints. Label each photograph on the back side with description (of what and from where taken), name and address of building, name of photographer and date taken. Also deliver to GSA one set of 35mm or 4"x5" color negatives (this is up to the Project Mgr which to order), and a photo CD containing each image as a high resolution TIFF file. Include a signed letter of release from the photographer granting GSA full rights to the materials.

#### AFTER IMAGES:

A minimum of 15, with to a maximum of 25 color photographs taken by a professional photographer upon construction completion. Views will include exterior, as well as interior where applicable, and will be taken when daylight is bright and sunny. Photography should involve attention to detail, and appropriate lighting to produce high quality photographs. All photographs should be produced with such artistic skill as to be suitable, in GSA's opinion, for exhibition purposes. Deliver to GSA two full sets of 8"x10" color prints. Label each photograph on the back side with description (of what and from where taken), name and address of building, name of photographer and date taken. Also deliver to GSA one set of 4"x5" color negatives, and a photo CD containing each image as a high resolution TIFF file. Include a signed letter of release from the photographer granting GSA full rights to the materials.

## PHOTOGRAPHY DISSEMINATION

Neither the photographer, the contractor nor any subcontractor shall use any photograph taken of the project site without first obtaining permission of GSA.

Limited public dissemination of the photographs may be allowed if they meet the following conditions:

- (1) Exterior photographs shall not show or label sensitive building information.
- (2) Interior photographs that are limited to publicly accessible space or have been cleared by GSA or the agency responsible for the space.

Sensitive building information includes but is not limited to:

- (1) Location of secure functions in a facility such as judges' chambers and libraries, prisoner or judges' secure circulation paths (both vertical and horizontal), cell blocks, sally ports, judges' parking, security areas, and childcare, major computer areas, or other client sensitive areas.

(2) Location of all utilities, such as heating, ventilation, air conditioning, information technology (IT) systems, location of air intake vents, water sources, gas lines, plumbing lines, building automation systems, power distribution systems, emergency generation equipment, uninterrupted power sources (UPS), security and fire alarm systems, routes and annunciation panels.

(3) Location and types of structural framing for the building and any information regarding structural analysis or building security and blast mitigation analysis and counter terrorism methods to protect the occupants and building.

(4) Information regarding security systems or strategies of any kind (such as camera locations) or security guards (such as number and locations).

#### **IV. Contract Clauses**

##### **IV.A. Public Buildings Service (PBS) Contract Clauses**

(1) Construction Manager as Constructor (CMc) Guaranteed Maximum Price with Construction Contingency Allowance and Shared Savings, PBS CMc Class Deviation (2009), Clause (April 2012).

(a) *General.* Pricing for the Guaranteed Maximum Price for the Option for Construction Services shall be subject to the requirements below:

(b) *Definitions.* The following definitions shall apply to this clause:

(i) "Cost of Performance" means the final sum of Cost of the Work and Fee.

(ii) "Costs" means allowable direct costs in accordance with Part 31 of the Federal Acquisition Regulation (FAR) in effect on the date of this Contract; marked up costs paid to subcontractors shall be deemed direct costs of the Contractor.

(iii) "Estimated Cost of the Work" (ECW) means the estimated direct cost of the construction work.

(c) *Guaranteed Maximum Price.* This Contract is awarded at a Guaranteed Maximum Price (GMP), which equals the sum of the ECW, the CMc Contingency Allowance (CCA) and the Fee. The proposed ECW incorporated into the Contract at award is a target ECW; a final ECW is negotiated during the Design Phase Services and is incorporated into the Contract prior to exercise of the GMP Option. The final ECW must be equal to or less than the target ECW. The CCA is 3% of the ECW, and the Fee is a fixed amount for all indirect costs, including general conditions, and profit.

(d) *Final Estimated Cost of the Work.*

(i) *Submission Requirements for Final ECW Proposal.* During the Design Phase, and at a time agreed by the Contracting Officer, the Contractor shall submit the following:

(1) A detailed statement of all firm-fixed-price work packages in the performance of the Construction Work to date;

- (2) A proposed final ECW;
- (3) Sufficient data to support the accuracy and reliability of the estimate;
- (4) An explanation of the difference between the proposed final ECW and the target ECW used to establish the GMP; and
- (5) The Contractor's affirmation that:
  - (A) It has satisfied itself that the Project as described in the specifications and construction drawings is constructible using commercially practicable means and methods;
  - (B) It has satisfied itself that the Work has been sufficiently described to enable it to estimate the Cost of the Work with reasonable accuracy;
  - (C) It has disclosed to the Contracting Officer all of its actual knowledge relating to omissions of design information that may affect the Cost of the Work; and
  - (D) It acknowledges that the final ECW and time established for completion shall not be adjusted on account of cost or time attributable to discovered omissions of design information required to be disclosed under this Clause.

(ii) *Establishment of the Final ECW.* The Parties shall negotiate a final ECW based on the data provided under Paragraph (d) of this Section; provided, that the final ECW, CCA and Fee may not exceed the GMP established in the Contract. If the proposed final ECW is less than the target ECW, the GMP shall be reduced accordingly. The final ECW shall be established and incorporated into the Contract by bilateral modification upon the Contracting Officer's written acceptance of the final negotiated ECW. The Contracting Officer shall not accept a final ECW proposal that does not include the written affirmation described in this Clause.

(e) The Government shall not exercise the option for Construction Work unless the final ECW has been established as set forth in the Contract.

(f) *Adjustment of ECW and GMP.* The ECW and GMP shall be subject to adjustment for changes and any other conditions giving rise to entitlement to an adjustment under this Contract. The ECW and GMP shall be adjusted down for deletions to the scope of the Construction Services.

(g) *Conversion to Firm-fixed-price Prior to Final Settlement.*

(i) *Submission Requirements for Conversion to a Firm-Fixed Price.* If the Parties agree to negotiate and establish a firm-fixed-price for the Construction Work prior to the exercise of the GMP Option, or at the request of the Contracting Officer, the Contractor shall submit the following:

- (1) A proposed firm-fixed-price proposal for the completion of the Work, which shall include all markups, including profit.

(2) A detailed statement of any Costs incurred in the performance of the Work up to date.

(ii) *Establishment of Firm-Fixed-Price Contract*

(1) *Prior to Exercise of GMP Option.* The Parties may negotiate and establish a firm-fixed-price for the Work prior to the exercise of the GMP Option based on the data provided under Paragraph (g)(1); provided that the firm-fixed-price shall not exceed the GMP. The Contracting Officer shall have the right, but not the

obligation, to exercise the GMP Option at the firm-fixed-price within 120 calendar days of the establishment of such price.

(2) *After Exercise of the GMP Option.* At any time prior to final settlement, the Contracting Officer may request that the Contractor provide a firm-fixed-price proposal for the completion of the Work in accordance with Paragraph (g)(1). Within 60 calendar days of such request, the Contractor shall provide such data. Within 60 calendar days of receipt of the Contractor's proposal, the Contracting Officer shall have the right, but not the obligation, to convert the Contract to a firm-fixed-price Contract at the proposed fixed price or as otherwise negotiated by the Parties; provided that the firm-fixed-price, plus any costs incurred in the performance of the Work, shall not exceed the GMP. If the Contract is not converted to firm-fixed-price Contract, then the Final Settlement of the Contractor's compensation shall be determined in accordance with paragraph (h).

(iii) *Payments.* If this Contract is converted to a firm-fixed-price Contract, the Contractor shall submit a revised schedule of values for the Work allocating the unpaid balance of the fixed price to the itemized work activities remaining uncompleted, which shall be the basis for remaining progress payments.

(h) *Final Settlement.* The Final Settlement amount shall consist of the Cost of Performance and the Contractor's Shared Savings, if any; provided that in no event shall the Final Settlement exceed the GMP. The Final Settlement amount shall be the Contractor's total compensation due under the Contract.

(i) *Submission Requirements for Final Settlement Proposal.* The Contractor shall submit a Final Settlement Proposal within 120 days of substantial completion to determine the Cost of the Work, which shall include the following:

(1) A detailed statement of all Costs incurred by the Contractor in performing the Work;

(2) A firm-fixed-price proposal for the performance of the remaining work, if any, that may be necessary to complete performance of the Work;

(3) An executed Release of Claims, which must describe any and all exceptions, including a description of any outstanding claims; and

(4) Any other relevant data that the Contracting Officer may reasonably require.

(ii) *Determination of the Cost of the Work.* The Cost of the Work shall be the sum of all Costs incurred by the Contractor in performing the Work, the proposed fixed price

for performance of remaining work, if any, less the residual value of any Contractor retained inventory. In order to determine the Cost of the Work, the Contracting Officer may require an audit of the Contractor's records and/or the Contractor's Proposal. Establishment of the Cost of the Work shall be subject to negotiation between the Government and the Contractor. In the event that the Parties are unable to reach agreement, the Contracting Officer may unilaterally determine the Cost of the Work, and such determination shall be subject to the clause titled "Disputes."

(iii) *Determination of the Shared Savings.* If the Cost of Performance is equal to or greater than the GMP, the Contractor is not entitled to any additional compensation. If the cost of Performance is less than the GMP, the Contractor is entitled to the specified percentage, if any, of the difference between the GMP and the Cost of Performance, as Shared Savings.

(i) *Subcontracts.* No subcontract placed under this Contract may provide for cost-plus-a-percentage of cost. Any costs incurred by the Contractor as a result of such a subcontract shall not be included in the Cost of the Work or the Final Settlement.

(j) *Open Book Access.* At any time prior to converting the Contract to a firm fixed price, the Government and its representatives, including designated auditors and accountants, shall have the right, but not the obligation, to attend any and all project meetings and shall have access to any and all records maintained by the Contractor relating to the Project. The Contractor shall include this requirement for Open Book Access by the Government in its subcontracts for the Project.

(k) *Termination.* If this Contract is terminated, the Contractor shall not be entitled to Shared Savings.

#### **IV.B. Clauses Incorporated in Full Text**

##### **(1) FAR 52.222-99 Establishing a Minimum Wage for Contractor (JUL 2014) (DEVIATION)**

This clause implements Executive Order 13658, Establishing a Minimum Wage for Contractors, dated February 12, 2014, and OMB Policy Memorandum M-14-09, Implementation of the President's Executive Order Establishing a Minimum Wage for Contractors, dated June 12, 2014.

(a) Each service employee, laborer, or mechanic employed in the United States (the 50 states and the District of Columbia) in the performance of this contract by the prime Contractor or any subcontractor, regardless of any contractual relationship which may be alleged to exist between the Contractor and service employee, laborer, or mechanic, shall be paid not less than the applicable minimum wage under Executive Order 13658. The minimum wage required to be paid to each service employee, laborer, or mechanic performing work on this contract between January 1, 2015, and December 31, 2015, shall be \$10.10 per hour.

(b) The Contractor shall adjust the minimum wage paid under this contract each time the Secretary of Labor's annual determination of the applicable minimum wage under section 2(a)(ii) of Executive Order 13658 results in a higher minimum wage. Adjustments to the Executive Order minimum wage under section 2(a)(ii) of Executive Order 13658 will be effective for all service employees, laborers, or mechanics subject to the Executive Order beginning January 1 of the following year. The Secretary of Labor will publish annual determinations in the Federal Register no later than 90 days before such new wage is to take effect. The Secretary will also publish the applicable minimum wage on [www.wdol.gov](http://www.wdol.gov)

(or any successor website). The applicable published minimum wage is incorporated by reference into this contract.

(c) The Contracting Officer will adjust the contract price or contract unit price under this clause only for the increase in labor costs resulting from the annual inflation increases in the Executive Order 13658 minimum wage beginning on January 1, 2016. The contracting Officer shall consider documentation as to the specific costs and workers impacted in determining the amount of the adjustment.

(d) The Contracting Officer will not adjust the contract price under this clause for any costs other than those identified in paragraph (c) of this clause, and will not provide price adjustments under this clause that result in duplicate price adjustments with the respective clause of this contract implementing the Service Contract Labor Standards statute (formerly known as the Service Contract Act) or the Wage Rate Requirements (Construction) statute (formerly known as the Davis Bacon Act).

(e) The Contractor shall include the substance of this clause, including this paragraph (e) in all subcontracts.

(2) FAR 52.223-2 Affirmative Procurement of Biobased Products Under Service and Construction Contracts (SEP 2013)

(a) In the performance of this contract, the contractor shall make maximum use of biobased products that are United States Department of Agriculture (USDA)-designated items unless—

(1) The product cannot be acquired—

- (i) Competitively within a time frame providing for compliance with the contract performance schedule;
- (ii) Meeting contract performance requirements; or
- (iii) At a reasonable price.

(2) The product is to be used in an application covered by a USDA categorical exemption (see 7 CFR 3201.3(e)). For example, all USDA-designated items are exempt from the preferred procurement requirement for the following:

- (i) Spacecraft system and launch support equipment.
- (ii) Military equipment, i.e., a product or system designed or procured for combat or combat-related missions.

(b) Information about this requirement and these products is available at [BioPreferred](#).

(c) In the performance of this contract, the Contractor shall—

(1) Report to [System Award Management](#), with a copy to the Contracting Officer, on the product types and dollar value of any USDA-designated biobased products purchased by the Contractor during the previous Government fiscal year, between October 1 and September 30; and

(2) Submit this report no later than—

- (i) October 31 of each year during contract performance; and
- (ii) At the end of contract performance.

(3) FAR 52.223-9 Estimate of Percentage of Recovered Material Content for EPA-Designated Items (MAY 08)

(a) *Definitions.* As used in this clause—

“Postconsumer material” means a material or finished product that has served its intended use and has been discarded for disposal or recovery, having completed its life as a consumer item. Postconsumer material is a part of the broader category of “recovered material.”

“Recovered material” means waste materials and by-products recovered or diverted from solid waste, but the term does not include those materials and by-products generated from, and commonly reused within, an original manufacturing process.

(b) The Contractor, on completion of this Contract, shall—

(1) Estimate the percentage of the total recovered material content for EPA-designated item(s) delivered and/or used in contract performance, including, if applicable, the percentage of post-consumer material content; and

(2) Submit this estimate to the Contracting Officer.

(4) GSAR 552.204-9 Personal Identity Verification Requirements (OCT 2012)

(a) The contractor shall comply with GSA personal identity verification requirements, identified at [HSP12](#), if contractor employees require access to GSA controlled facilities or information systems to perform contract requirements.

(b) The Contractor shall insert this clause in all subcontracts when the subcontractor is required to have access to a GSA-controlled facility or access to a GSA-controlled information system.

(5) GSAR 552.252-6 Authorized Deviations in Clauses (Deviation FAR 52.252-6) (SEP 99)

(a) Deviations to FAR clauses.

(1) This solicitation or contract indicates any authorized deviation to a Federal Acquisition Regulation (48 CFR Chapter 1) clause by the addition of “(DEVIATION)” after the date of the clause, if the clause is not published in the General Services Administration Acquisition Regulation (48 CFR Chapter 5).

(2) This solicitation indicates any authorized deviation to a Federal Acquisition Regulation (FAR) clause that is published in the General Services Administration Acquisition Regulation by the addition of “(DEVIATION (FAR clause no.))” after the date of the clause.

(b) Deviations to GSAR clauses. This solicitation indicates any authorized deviation to a General Services Administration Acquisition Regulation clause by the addition of “(DEVIATION)” after the date of the clause.

(c) “Substantially the same as” clauses. Changes in wording of clauses prescribed for use on a “substantially the same as” basis are not considered deviations.

(6) Buy American Requirements

**52.225-9 -- Buy American—Construction Materials.**

As prescribed in [25.1102\(a\)](#), insert the following clause:

**Buy American—Construction Materials (May 2014)**

(a) *Definitions.* As used in this clause--

“Commercially available off-the-shelf (COTS) item”—

- (1) Means any item of supply (including construction material) that is—
  - (i) A commercial item (as defined in paragraph (1) of the definition at FAR 2.101);
  - (ii) Sold in substantial quantities in the commercial marketplace; and
  - (iii) Offered to the Government, under a contract or subcontract at any tier, without modification, in the same form in which it is sold in the commercial marketplace; and
- (2) Does not include bulk cargo, as defined in 46 U.S.C. 40102(4), such as agricultural products and petroleum products.

“Component” means an article, material, or supply incorporated directly into a construction material.

“Construction material” means an article, material, or supply brought to the construction site by the Contractor or a subcontractor for incorporation into the building or work. The term also includes an item brought to the site preassembled from articles, materials, or supplies. However, emergency life safety systems, such as emergency lighting, fire alarm, and audio evacuation systems, that are discrete systems incorporated into a public building or work and that are produced as complete systems, are evaluated as a single and distinct construction material regardless of when or how the individual parts or components of those systems are delivered to the construction site. Materials purchased directly by the Government are supplies, not construction material.

“Cost of components” means--

- (1) For components purchased by the Contractor, the acquisition cost, including transportation costs to the place of incorporation into the construction material (whether or not such costs are paid to a domestic firm), and any applicable duty (whether or not a duty-free entry certificate is issued); or
- (2) For components manufactured by the Contractor, all costs associated with the manufacture of the component, including transportation costs as described in paragraph (1) of this definition, plus allocable overhead costs, but excluding profit. Cost of components does not include any costs associated with the manufacture of the construction material.

“Domestic construction material” means—

- (1) An unmanufactured construction material mined or produced in the United States;
- (2) A construction material manufactured in the United States, if—
  - (i) The cost of its components mined, produced, or manufactured in the United States exceeds 50 percent of the cost of all its components. Components of foreign origin of the same class or kind for which nonavailability determinations have been made are treated as domestic; or
  - (ii) The construction material is a COTS item.



“Foreign construction material” means a construction material other than a domestic construction material.

“United States” means the 50 States, the District of Columbia, and outlying areas.

(b) *Domestic preference.*

- (1) This clause implements the 41 U.S.C. chapter 83, Buy American, by providing a preference for domestic construction material. In accordance with 41 U.S.C. 1907, the component test of the Buy American statute is waived for construction material that is a COTS item. (See FAR 12.505(a)(2)). The Contractor shall use only domestic construction material in performing this contract, except as provided in paragraphs (b)(2) and (b)(3) of this clause.
- (2) This requirement does not apply to information technology that is a commercial item or to the construction materials or components listed by the Government as follows: \_\_\_\_\_ [*Contracting Officer to list applicable excepted materials or indicate “none”*]
- (3) The Contracting Officer may add other foreign construction material to the list in paragraph (b)(2) of this clause if the Government determines that
  - (i) The cost of domestic construction material would be unreasonable. The cost of a particular domestic construction material subject to the requirements of the Buy American statute is unreasonable when the cost of such material exceeds the cost of foreign material by more than 6 percent;
  - (ii) The application of the restriction of the Buy American statute to a particular construction material would be impracticable or inconsistent with the public interest; or
  - (iii) The construction material is not mined, produced, or manufactured in the United States in sufficient and reasonably available commercial quantities of a satisfactory quality.

(c) *Request for determination of inapplicability of the Buy American statute.*

- (1)
  - (i) Any Contractor request to use foreign construction material in accordance with paragraph (b)(3) of this clause shall include adequate information for Government evaluation of the request, including--
    - (A) A description of the foreign and domestic construction materials;
    - (B) Unit of measure;
    - (C) Quantity;
    - (D) Price;
    - (E) Time of delivery or availability;
    - (F) Location of the construction project;
    - (G) Name and address of the proposed supplier; and
    - (H) A detailed justification of the reason for use of foreign construction materials cited in accordance with paragraph (b)(3) of this clause.

- (ii) A request based on unreasonable cost shall include a reasonable survey of the market and a completed price comparison table in the format in paragraph (d) of this clause.
- (iii) The price of construction material shall include all delivery costs to the construction site and any applicable duty (whether or not a duty-free certificate may be issued).
- (iv) Any Contractor request for a determination submitted after contract award shall explain why the Contractor could not reasonably foresee the need for such determination and could not have requested the determination before contract award. If the Contractor does not submit a satisfactory explanation, the Contracting Officer need not make a determination.
- (2) If the Government determines after contract award that an exception to the Buy American statute applies and the Contracting Officer and the Contractor negotiate adequate consideration, the Contracting Officer will modify the contract to allow use of the foreign construction material. However, when the basis for the exception is the unreasonable price of a domestic construction material, adequate consideration is not less than the differential established in paragraph (b)(3)(i) of this clause.
- (3) Unless the Government determines that an exception to the Buy American statute applies, use of foreign construction material is noncompliant with the Buy American statute.

(d) *Data.* To permit evaluation of requests under paragraph (c) of this clause based on unreasonable cost, the Contractor shall include the following information and any applicable supporting data based on the survey of suppliers:

Foreign and Domestic Construction Materials Price Comparison

<b>Construction material description</b>	<b>Unit of measure</b>	<b>Quantity</b>	<b>Price (dollars) *</b>
<i>Item 1</i>			
<b>Foreign construction material</b>			
<b>Domestic construction material</b>			
<i>Item 2</i>			
<b>Foreign construction</b>			

<b>material</b>			
<b>Domestic construction material</b>			

*[List name, address, telephone number, and contact for suppliers surveyed. Attach copy of response; if oral, attach summary.]*

*[Include other applicable supporting information.]*

*[\* Include all delivery costs to the construction site and any applicable duty (whether or not a duty-free entry certificate is issued).]*

(End of Clause)

#### **IV.C. Additional Clauses**

##### **(1) Project Labor Agreement (PLA)**

This Project Labor Agreement section is binding on the Contractor if the proposal selected for award was subject to PLA requirements. If the proposal selected for award was not subject to PLA requirements, this section is not binding on the Contractor.

52.222-34, Project Labor Agreement (May 2010) (DEVIATION July 2011)

(a) Definitions. As used in this clause—

“Labor organization” means a labor organization as defined in 29 U.S.C. 152(5).

“Project labor agreement” means a pre-hire collective bargaining agreement with the labor organizations having jurisdiction over the trades involved in the construction of the project that establishes the terms and conditions of employment for a specific construction project and is an agreement described in 29 U.S.C. 158(f).

(b) The Contractor shall maintain in a current status throughout the life of the contract the project labor agreement entered into prior to the award of this contract in accordance with solicitation provision 52.222-33, Notice of Requirement for Project Labor Agreement.

(c) Subcontracts. The Contractor shall include the substance of this clause, including this paragraph (c), in all subcontracts with subcontractors engaged in construction on the construction project. (End of Clause).

##### **(2) Limitations on Subcontracting:**

#### **52.219-14 -- Limitations on Subcontracting.**

As prescribed in 19.508(e) or 19.811-3(e), insert the following clause:

#### **Limitations on Subcontracting (Jan 2017)**

(a) This clause does not apply to the unrestricted portion of a partial set-aside.

(b) *Applicability*. This clause applies only to--

- (1) Contracts that have been set aside or reserved for small business concerns or 8(a) participants;
- (2) Part or parts of a multiple-award contract that have been set aside for small business concerns or 8(a) participants; and
- (3) Orders set aside for small business or 8(a) participants under multiple-award contracts as described in 8.405-5 and 16.505(b)(2)(i)(F).

(c) By submission of an offer and execution of a contract, the Offeror/Contractor agrees that in performance of the contract in the case of a contract for --

- (1) *Services (except construction)*. At least 50 percent of the cost of contract performance incurred for personnel shall be expended for employees of the concern.
- (2) *Supplies (other than procurement from a nonmanufacturer of such supplies)*. The concern shall perform work for at least 50 percent of the cost of manufacturing the supplies, not including the cost of materials.
- (3) *General construction*. The concern will perform at least 15 percent of the cost of the contract, not including the cost of materials, with its own employees.
- (4) *Construction by special trade contractors*. The concern will perform at least 25 percent of the cost of the contract, not including the cost of materials, with its own employees.

(3) FAR 52.222-62, Paid Sick Leave under Executive Order 13706

*Implements EO 13706 which requires incorporation of new FAR Clause 52.222-62 in all contracts with 52.222-6, Construction Wage Rate Requirements, (\$2,000 threshold), or 52.222-41, Service Contract Labor Standards, (\$2,500 threshold) and performance is in whole or in part in the United States.*

(4) FAR 52.223-21, FOAMS (Jun 2016):

(a) Definitions. As used in this clause--

"Global warming potential" means how much a given mass of a chemical contributes to global warming over a given time period compared to the same mass of carbon dioxide. Carbon dioxide's global warming potential is defined as 1.0.

"High global warming potential hydrofluorocarbons" means any hydrofluorocarbons in a particular end use for which EPA's Significant New Alternatives Policy (SNAP) program has identified other acceptable alternatives that have lower global warming potential. The SNAP list of alternatives is found at 40 CFR part 82 subpart G with supplemental tables of alternatives available at <http://www.epa.gov/snap/>.

"Hydrofluorocarbons" means compounds that contain only hydrogen, fluorine, and carbon.

(b) Unless otherwise specified in the contract, the Contractor shall reduce its use, release, and emissions of high global warming potential hydrofluorocarbons and refrigerant blends containing hydrofluorocarbons, when feasible, from foam blowing agents, under this contract. When determining feasibility of using a particular alternative, the Contractor shall consider environmental, technical, and economic factors such as--

- (1) In-use emission rates, energy efficiency, and safety;
- (2) Ability to meet performance requirements; and

(3) Commercial availability at a reasonable cost.

(c) The Contractor shall refer to EPA's SNAP program to identify alternatives. The SNAP list of alternatives is found at 40 CFR part 82 subpart G with supplemental tables available at <http://www.epa.gov/snap/>.

(5) FAR 52.244-5, Competition in Subcontracting (DEC 96)

(a) The Contractor shall select subcontractors (including suppliers) on a competitive basis to the maximum practical extent consistent with the objectives and requirements of the contract.

(b) If the Contractor is an approved mentor under the Department of Defense Pilot Mentor-Protégé Program (Pub. L. 101-510, section 831 as amended), the Contractor may award subcontracts under this contract on a noncompetitive basis to its protégés.

**IV.D. Clauses Incorporated by Reference**

The following FAR/GSAR clauses are supplemented in Section III, Terms and Conditions: 52.211-10, 52.211-12, 52.211-13, 52.228-5, 52.232-5, 52.232-27, 52.236-6, 52.236-11, 52.236-21, 552.228-5, 552.236-77, 552.236-78, 552.236-79 and 552.246-72.

(1) FAR 52.252-2, Clauses Incorporated by Reference (Feb 1998)

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. The full text of a clause may also be accessed electronically at this address:

[Federal Acquisition Regulation](#)

(2) Federal Acquisition Regulation (FAR) clauses:

NUMBER	TITLE	DATE
52.202-1	Definitions	NOV 13
52.203-3	Gratuities	APR 84
52.203-5	Covenant Against Contingent Fees	JUN 14
52.203-6	Restrictions on Subcontractor Sales to the Government	SEP 06
52.203-7	Anti-Kickback Procedures	MAY 14
52.203-8	Cancellation, Rescission, and Recovery of Funds for Illegal or Improper Activity	MAY 14
52.203-10	Price or Fee Adjustment for Illegal or Improper Activity	MAY 14
52.203-12	Limitation on Payments to Influence Certain Federal Transactions	OCT 10
52.203-13	Contractor Code of Business Ethics and Conduct	APR 10
52.203-14	Display of Hotline Poster(s) (Applies if Contract is Greater than \$5 Million or Performance Period is Greater than 120 Days)	DEC 07

52.203-17	Contractor Employee Whistleblower Rights and Requirement to Inform Employees of Whistleblower Rights	APR 14
52.204-2	Security Requirements	AUG 96
52.204-4	Printed or Copied Double-Sided on Postconsumer Fiber Content Paper	MAY 11
52.204-7	System for Award Management	JUL 13
52.204-9	Personal Identity Verification of Contractor Personnel	JAN 11
52.204-10	Reporting Executive Compensation and First-Tier Subcontract Awards	JUL 13
52.204-13	System for Award Management Maintenance	JUL 13
52.204-14	Service Contract Reporting Requirements (Applies to contracts estimated total value of \$500,000 or greater)	JAN 14
52.204-18	Commercial and Government Entity Code Maintenance	NOV 14
52.204-19	Incorporation by Reference of Representations and Certifications	DEC 14
52.209-6	Protecting the Government's Interest When Subcontracting with Contractors Debarred, Suspended, or Proposed for Debarment	AUG 13
52.209-9	Updates of Publicly Available Information Regarding Responsibility Matters	JUL 13
52.209-10	Prohibition on Contracting with Inverted Domestic Corporations	DEC 14
52.211-10	Commencement, Prosecution, and Completion of Work	APR 84
52.211-12	Liquidated Damages—Construction (If Applicable)	SEP 00
52.211-13	Time Extensions	SEP 00
52.211-18	Variation in Estimated Quantity	APR 84
52.215-2	Audit and Records-Negotiation	OCT10
52.215-10	Price Reduction for Defective Cost or Pricing Data	AUG 11
52.215-11	Price Reduction for Defective Cost or Pricing Data—Modifications	AUG 11
52.215-12	Subcontractor Cost or Pricing Data	OCT 10
52.215-13	Subcontractor Cost or Pricing Data—Modifications	OCT 10
52.215-15	Pension Adjustments and Asset Reversions	OCT 10

52.215-17	Waiver of Facilities Capital Cost of Money	OCT 97
52.215-18	Reversion or Adjustment of Plans for Postretirement Benefits (PRB) Other Than Pensions	JUL 05
52.219-8	Utilization of Small Business Concerns	OCT 14
52.219-9	Small Business Subcontracting Plan	JAN 17
52.219-14	Limitations on Subcontracting	NOV 11
52.219-16	Liquidated Damages – Subcontracting Plan	JAN 99
52.219-28	Post-Award Small Business Program Rerepresentation	JUL 13
52.222-3	Convict Labor	JUN 03
52.222-4	Contract Work Hours and Safety Standards—Overtime Compensation	MAY 14
52.222-6	Construction Wage Rate Requirements	MAY 14
52.222-7	Withholding of Funds	MAY 14
52.222-8	Payrolls and Basic Records	MAY 14
52.222-9	Apprentices and Trainees	JUL 05
52.222-10	Compliance with Copeland Act Requirements	FEB 88
52.222-11	Subcontracts (Labor Standards)	MAY 14
52.222-12	Contract Termination—Debarment	MAY 14
52.222-13	Compliance with Construction Wage Rate Requirements and Related Regulations	MAY 14
52.222-14	Disputes Concerning Labor Standards	FEB 88
52.222-15	Certification of Eligibility	MAY 14
52.222-21	Prohibition of Segregated Facilities	APR 15
52.222-26	Equal Opportunity	APR 15
52.222-27	Affirmative Action Compliance Requirements for Construction	APR 15
52.222-35	Equal Opportunity for Veterans	JUL 14
52.222-36	Equal Opportunity for Workers with Disabilities	JUL 14
52.222-37	Employment Reports on Veterans	JUL 14
52.222-40	Notification of Employee Rights Under the National Labor Relations Act	DEC 10

52.222-50	Combating Trafficking in Persons	MAR 15
52.222-54	Employment Eligibility Verification	AUG 13
52.222-55	Minimum Wages Under Executive Order 13658	DEC 14
52.223-3	Hazardous Material Identification and Material Safety Data  Alternate I	JAN 97  JUL 95
52.223-5	Pollution Prevention and Right-to-Know Information	MAY 11
52.223-6	Drug-Free Workplace	MAY 01
52.223-15	Energy Efficiency in Energy-Consuming Products	DEC 07
52.223-17	Affirmative Procurement of EPA-designated Items in Service and Construction Contracts	MAY 08
52.223-18 52.224-1 52.224-2	Encouraging Contractor Policies to Ban Text Messaging While Driving  Privacy Act Notification Privacy Act	AUG 11  APR 84 APR 84
52.223-19	Compliance with Environmental Management Systems	MAY 11
52.225-13	Restrictions on Certain Foreign Purchases	JUN 08
52.227-1	Authorization and Consent	DEC 07
52.227-2	Notice and Assistance Regarding Patent and Copyright	DEC 07
52.227-4	Patent Indemnity—Construction Contracts	DEC 07
52.228-2	Additional Bond Security	OCT 97
52.228-5	Insurance—Work on a Government Installation	JAN 97
52.228-11	Pledges of Assets	JAN 12
52.228-12	Prospective Subcontractor Requests for Bonds	MAY 14
52.228-14	Irrevocable Letter of Credit	NOV 14
52.228-15	Performance and Payment Bonds—Construction	OCT 10
52.229-3	Federal, State, and Local Taxes	FEB 13
52.232-5	Payments under Fixed-Price Construction Contracts	MAY 14
52.232-17	Interest	MAY 14



52.232-23	Assignment of Claims	MAY 14
52.232-27	Prompt Payment for Construction Contracts	MAY 14
52.232-33	Payment by Electronic Funds Transfer—System for Award Management	JUL 13
52.232-39	Unenforceability of Unauthorized Obligations	JUN 13
52.232-40	Provide Accelerated Payments to Small Business Subcontractors	DEC 13
52.233-1	Disputes	MAY 14
	Alternate I	DEC 91
52.233-3	Protest after Award	AUG 96
52.233-4	Applicable Law for Breach of Contract Claim	OCT 04
52.236-1	Performance of Work by the Contractor	APR 84
52.236-2	Differing Site Conditions	APR 84
52.236-3	Site Investigation and Conditions Affecting the Work	APR 84
52.236-5	Material and Workmanship	APR 84
52.236-6	Superintendence by the Contractor	APR 84
52.236-7	Permits and Responsibilities	NOV 91
52.236-8	Other Contracts	APR 84
52.236-9	Protection of Existing Vegetation, Structures, Equipment, Utilities, and Improvements	APR 84
52.236-10	Operations and Storage Areas	APR 84
52.236-11	Use and Possession Prior to Completion	APR 84
52.236-12	Cleaning Up	APR 84
52.236-13	Accident Prevention Alternate I	NOV 91
52.236-14	Availability and Use of Utility Services	APR 84
52.236-17	Layout of Work	APR 84
52.236-21	Specifications and Drawings for Construction	FEB 97
52.242-1	Notice of Intent to Disallow costs	APR 84
52.242-3	Penalties for Unallowable Costs	MAY 14
52.242-13	Bankruptcy	JUL 95
52.242-14	Suspension of Work	APR 84

52.243-4	Changes	JUN 07
52.244-6	Subcontracts for Commercial Items	APR 15
52.245-1	Government Property Alternate 1	APR 12
52.245-9	Use and Charges	APR 12
52.246-12	Inspection of Construction	AUG 96
52.246-21	Warranty of Construction	MAR 94
52.248-3	Value Engineering—Construction	OCT 10
52.249-2	Termination for Convenience of the Government (Fixed-Price)	APR 12
	Alternate I	SEP 96
52.249-10	Default (Fixed-Price Construction)	APR 84
52.253-1	Computer Generated Forms	JAN 91

(3) GSA Acquisition Regulation (GSAR) clauses:

NUMBER	TITLE	DATE
552.203-71	Restriction on Advertising	SEP 99
552.211-72	References to Specifications in Drawings	FEB 96
552.215-70	Examination of Records by GSA (Applicable if over \$100,000)	JUL 16
552.219-75	GSA Mentor-Protégé Program	SEP 09
552.219-76	Mentor Requirements and Evaluation	MAR 12
552.227-70	Government Rights (Unlimited)	MAY 89
552.228-5	Government As Additional Insured	JAN 16
552.229-70	Federal, State, and Local Taxes	APR 84
552.236-70	Definitions	APR 84
552.236-71	Authorities and Limitations	APR 84
552.236-77	Specifications and Drawings	SEP 99
552.236-78	Shop Drawings, Coordination Drawings, and Schedules	SEP 99
552.236-82	Subcontracts	APR 84
552.243-71	Equitable Adjustments	JAN 09
552.246-72	Final Inspections and Tests	SEP 99

**IV.E. Subcontract Requirements**

The Contractor is advised that many FAR, GSAR and other Agreement clauses are required to be flowed down to subcontracts. Clauses containing flow down requirements include, but may

not be limited to, those listed below. The Contractor is responsible for ensuring that all necessary flow-down clauses are included in all subcontracts.

(1) FAR Clauses:

NUMBER	TITLE	DATE
52.203-7	Anti-Kickback Procedures	MAY 14
52.203-10	Price or Fee Adjustment for Illegal or Improper Activity	MAY 14
52.203-12	Limitation on Payments to Influence Certain Federal Transactions	OCT 10
52.203-13	Contractor Code of Business Ethics and Conduct	OCT 15
52.203-14	Display of Hotline Poster(s) (Applies if Contract is Greater than \$5 Million or Performance Period is Greater than 120 Days)	OCT 15
52.204-9	Personal Identity Verification of Contractor Personnel	JAN 11
52.204-10	Reporting Executive Compensation and First-Tier Subcontract Awards	OCT 16
52.204-14	Service Contract Reporting Requirements (Applies to contracts estimated total value of \$500,000 or greater)	OCT 16
52.215-2	Audit and Records-Negotiation	OCT 10
52.215-12	Subcontractor Cost or Pricing Data	OCT 10
52.215-13	Subcontractor Cost or Pricing Data—Modifications	OCT 10
52.215-15	Pension Adjustments and Asset Reversions	OCT 10
52.215-18	Reversion or Adjustment of Plans for Postretirement Benefits (PRB) Other Than Pensions	JUL 05
52.222-4	Contract Work Hours and Safety Standards—Overtime Compensation	MAY 14
52.222-6	Construction Wage Rate Requirements	MAY 14
52.222-7	Withholding of Funds	MAY 14
52.222-8	Payrolls and Basic Records	MAY 14
52.222-9	Apprentices and Trainees	JUL 05
52.222-10	Compliance with Copeland Act Requirements	FEB 88
52.222-11	Subcontracts (Labor Standards)	MAY 14
52.222-12	Contract Termination—Debarment	MAY 14
52.222-13	Compliance with Construction Wage Rate Requirements and Related Regulations	MAY 14
52.222-14	Disputes Concerning Labor Standards	FEB 88

52.222-15	Certification of Eligibility	MAY 14
52.222-21	Prohibition of Segregated Facilities	APR 15
52.222-26	Equal Opportunity	SEP 16
52.222-27	Affirmative Action Compliance Requirements for Construction	APR 15
52.222-35	Equal Opportunity for Veterans	OCT 15
52.222-36	Equal Opportunity for Workers with Disabilities	JUL 14
52.222-37	Employment Reports on Veterans	FEB 16
52.222-40	Notification of Employee Rights Under the National Labor Relations Act	DEC 10
52.222-50	Combating Trafficking in Persons	MAR 15
52.222-54	Employment Eligibility Verification	OCT 15
52.222-55	Minimum Wages Under Executive Order 13658	DEC 15
52.223-6	Drug-Free Workplace	MAY 01
52.223-15	Energy Efficiency in Energy-Consuming Products	DEC 07
52.223-17	Affirmative Procurement of EPA-designated Items in Service and Construction Contracts	MAY 08
52.223-19	Compliance with Environmental Management Systems	MAY 11
52.225-13	Restrictions on Certain Foreign Purchases	JUN 08
52.227-1	Authorization and Consent	DEC 07
52.228-5	Insurance—Work on a Government Installation	JAN 97
52.236-13	Accident Prevention Alternate I	NOV 91

(2) GSA Acquisition Regulation (GSAR) Clauses:

NUMBER	TITLE	DATE
552.215-70	Examination of Records by GSA	JUL 16

(3) Agreement Clauses:

(i) In Section III of this contract, *Sensitive But Unclassified (SBU) Building Information* and *Safeguarding Sensitive Data and information Technology Resources*. (Terms and Conditions).

(ii) In accordance with CAS clauses 52.230-2 and 52-230-3 include the substance of the CAS clause in all NEGOTIATED subcontracts unless the subcontractor meets one of the CAS exemptions (e.g., small business, the subcontract will not be subject to CAS).

## SECTION 01 14 00 - WORK RESTRICTIONS

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including Federal Acquisition Regulations (FAR) and General Services Administration Acquisition Regulations (GSAR) contract clauses, General and Supplementary Conditions, and Division 01 Specification Sections, apply to this Section.

#### 1.2 CONTRACTOR USE OF PREMISES

- A. The Contractor will review and document the existing conditions surrounding the project premises. Provide documentation to the Government prior to the commencement of any construction activity.
- B. During the construction period, the Contractor shall have full use of the designated premises for construction operations, including full use of the indicated work site, limited only by the Government's right to perform work or retain other contractors to perform work on portions of the project.
- C. The Contractor shall limit use of the premises to the work in areas indicated, and to allow for phased Government occupancy as indicated in these specifications and shown on the drawings. The work area will be dependent on whether or not alternates are chosen. The Contractor shall then propose the necessary work area for GSA review and approval prior to commencement of any construction activity.
  - 1. Confine operations at the site to areas indicated. Do not disturb portions of the site beyond the areas in which Work is indicated.
  - 2. Keep driveways and entrances serving the premises clear and available at all times to the Government, Government employees and to visitors. Do not use these areas for parking or storage of materials.
  - 3. Schedule deliveries to minimize space and time requirements for storage of material and equipment on site.
  - 4. Maintain existing building in a safe and watertight condition throughout the construction period. Repair damage caused by construction operations to the satisfaction of the Government. Take precautions to protect the building, its occupants and the public during the construction period. A representative of the Contractor shall be available to arrive on site within one (1) hour of notice should an emergency occur.
  - 5. Keep public areas, such as hallways, stairs, lobbies and toilet rooms, free from accumulation of waste material, rubbish, construction debris and construction materials.
  - 6. Space on the premises will be made available for the Contractor's storage and related activities, provided that its use will not interfere with operations of the Government. Arrange and gain approval for use of this space through the Contracting Officer.
  - 7. (b) (7)(F)

(b) (7)(F)  
(b) (7)(F)

(b) (7)(F)

9. Existing materials and equipment that are removed as part of the construction operations, and that are not reused or designated to be salvaged as Government property, shall become the property of the Contractor and shall be removed from the site. Storage or sale of excess salvageable materials and equipment is not permitted on site.
10. Pollution-producing equipment shall not be located near air intakes where airborne smoke or fumes could be drawn into the building. When not required for powering unloading operations, turn off engines when docked.
11. Smoking is not permitted in or around the building; see Facilities Management Regulation (FMR) Case 2008-102—3. Also see Code of Federal Regulations (CFR) 41 CFR Part 102-74.
12. No parking will be available on site during working hours for building occupants. The Contractor and Contractor's employees shall make their own arrangements for vehicle parking off-site.
13. Cell Phones: Contractor is to provide company cell phone during this contract. All cell phones to be "on vibrate" at all times. If a telephone begins audibly ringing, the building guards will take the cell phone and hold until the end of the working day prior to the contractor leaving the property. Cell phones are only permitted in construction area and contractor's office space.
14. No apparatus with an open flame is allowed to be used within the facility without the prior receipt of a burn permit. Contact the Field Office to obtain burn permits. Burn permits are required for each separate occurrence.
15. Permits: Refer to FAR 52.236-7
16. The work shall be sequenced to minimize disruption to building occupants, visitors, and maintenance activities. To the greatest extent feasible, demolition work should not take place until supplies are on hand to perform new work.
17. Coordinate with the GSA Building Manager and the COR for site access.
18. Coordinate with the GSA Building Manager and the COR on correct response procedures for any building system alarms occurring during or resulting from the construction process.
19. All building systems outside the immediate construction area shall be kept fully operational during normal working hours.
20. Protect building site from flying debris.

### 1.3 GOVERNMENT OCCUPANCY

- A. The Government will occupy the site and the existing building during the entire period of construction. Cooperate with the Government's representatives during construction operations to minimize conflicts, mitigate noise, and facilitate Government usage. Perform the Work in a manner that does not interfere with the Government's operations.
- B. The Government reserves the right to occupy, place, and install equipment in completed areas of the building prior to Substantial Completion, provided such occupancy does not interfere with completion of the Work. The Government's installation of equipment and partial occupancy shall not constitute acceptance of the total Work.
  1. Prior to partial Government occupancy, mechanical and electrical systems for the space shall be fully operational, and required inspections and tests shall be successfully completed. Upon occupancy, the Government will operate and maintain mechanical and electrical systems serving the occupied portions of the building.

2. Upon occupancy, the Government will assume responsibility for maintenance and custodial service for the occupied portions of the building.

#### 1.4 WORKING HOURS

- A. Government Occupied Hours: Government personnel are scheduled to occupy the building during the following hours on weekdays, Monday through Friday, except for established Government Holidays: 7:00AM to 7:00PM.
- B. Government Unoccupied Hours: Government personnel are not scheduled to occupy the building during times not indicated as Government Occupied Hours.
- C. Contractor's General Working Hours: The Contractor working hours shall be generally established to occur during Government Occupied Hours.
- D. Contractor's Required Working Hours: The following work shall be performed during Government Unoccupied Hours:
  1. Noisy and/or odor-producing work that may disrupt tenant operations in adjacent spaces.
  2. ACM abatement working hours:
    - a. On partially or fully occupied floors, ACM abatement shall occur between 6:00PM and 1:00AM on weekdays to allow for determination of clean air samples prior to tenants returning to the building. Contractor shall coordinate with GSA and 3<sup>rd</sup> party air monitor.
    - b. On fully unoccupied floors, ACM abatement can occur during Government Occupied Hours if properly coordinated with GSA and 3<sup>rd</sup> party air monitor.
    - c. All work restrictions that apply to general construction work also apply to ACM abatement, e.g. noise levels, odor, dust, etc. Refer to ACM Specification Section 028200 for further requirements.
- E. Work accomplished during Government Unoccupied Hours shall be performed at no additional cost to the Government. Contractor shall submit a proposed schedule, and gain the Contracting Officer's approval, at least 48 hours before proceeding with any work during Government Unoccupied Hours.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

**END OF SECTION 01 14 00**

## SECTION 01 32 20 - PHOTOGRAPHIC DOCUMENTATION

### PART 1 GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including Federal Acquisition Regulations (FAR) and General Services Administration Acquisition Regulations (GSAR) contract clauses, General and Supplementary Conditions, and Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for the following:
  - 1. Preconstruction photographs.
  - 2. Periodic construction photographs.
- B. See Division 01 Section "Closeout Procedures" for submitting digital media as Project Record Documents at Project closeout.
- C. See Division 01 Section "Demonstration and Training" for submitting videotapes of demonstration of equipment and training of Owner's personnel.
- D. See Division 01 Section "Indoor Air Quality (IAQ) Management" for LEED photographic documentation requirements.

#### 1.3 GENERAL

- A. Regular Construction Progress Photos. Contractor shall document, on a bi weekly basis, key components of the contract documents.

#### 1.4 SUBMITTALS

- A. Key Plan: Submit within thirty (30) calendar days of the NTP to COR or CO, a key plan of Project site and building with notation of vantage points marked for location and direction of each photograph. Indicate elevation or story of construction. Include same information as corresponding photographic documentation.
- B. Digital Photographs Contractor shall submit and/or upload to ePM, electronic files of each view to the GSA. Submit image files within three (3) calendar days of taking photographs.
  - 1. Digital Camera: Minimum resolution of 3600 x 2400 minimum 10 megapixels.
  - 2. Format: Minimum 3600 by 2400 pixels, in unaltered original files, with same aspect ratio as the sensor, un cropped, in folder named by date of photograph, accompanied by key plan file.
  - 3. Identification: Provide the following information with each image description in file metadata tag:
    - Name of Project.
    - Project number.

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SENSITIVE BUT UNCLASSIFIED (SBU) PROPERTY OF THE UNITED STATES GOVERNMENT FOR OFFICIAL USE ONLY  
DO NOT REMOVE THIS NOTICE - PROPERLY DESTROY OR RETURN DOCUMENTS WHEN NO LONGER NEEDED

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Building/facility name.  
Project region.  
Name and contact information for photographer.  
Name of Architect.  
Name of CMA.  
Name of Contractor.  
Contract number.  
Date photographs were taken.  
Weather conditions.  
Description of vantage point, indicating location, direction (by compass point), and elevation or story of construction.  
Unique sequential identifier keyed to accompanying key plan.

#### 1.5 USAGE RIGHTS

- A. Comply with General Services Administration Acquisition Manual (GSAM) Clause 552.227 70, Government Rights (Unlimited). See the construction contract for more information.

### PART 2 PRODUCTS

#### 2.1 PHOTOGRAPHIC MEDIA

- A. Digital Images: JPEG format with minimum sensor size of 10.0 resolution minimum 3600 by 2400 megapixels or greater.
- B. Video Format: Standard definition DVDs or CDs.
1. Identification: Each copy shall have an applied label containing the same identification information stated under Digital Photographs.

### PART 3 EXECUTION

#### 3.1 CONSTRUCTION PHOTOGRAPHS

- A. Preconstruction Photographs: Before construction is started, photographer shall take photographs of the site and surrounding properties from different points of view selected by GSA. The Contractor may choose to provide additional photographs.
1. Take not less than twenty (20) photographs to show the context of the work area both interior and exterior as required by the scope of services, of existing buildings and conditions adjacent to the project in sufficient detail to record the physical conditions at the start of construction.
- B. Construction Period Photographs: At intervals during construction, photographer shall take photographs of the project's progress from different points of view. Vantage points shall be selected by the photographer unless otherwise directed by GSA.
1. Frequency: Take photographs monthly coinciding with the cutoff date associated with each application for payment.

(b) (4)

2. Number: Take not less than twenty (20) photographs each time, to best show the status of construction and progress since taking previous photographs.
  3. In addition, take not less than one birds eye aerial photograph monthly from a drone, helicopter or low flying airplane at an elevation to clearly show the full project site and nearby adjacent conditions.
- C. Provide photos to highlight the implemented construction IAQ practices and protection of installed absorptive materials from moisture damage in accordance with the submittal requirements in Division 01 Section "Indoor Air Quality (IAQ) Management."

**END OF SECTION 01 32 20**

## SECTION 015930 - SECURITY REGULATIONS

### PART 1 - GENERAL

#### 1.1 GENERAL SECURITY REQUIREMENTS

- A. The General Services Administration (GSA) reserves the right to verify the identities of Contractor personnel with routine, unaccompanied access to GSA facilities or Information Technology (IT) systems and networks, to make contract employment suitability determinations based on background investigations, and control access to GSA facilities and IT systems and networks based on the suitability determinations. The term 'Contractor' refers to the General/Prime Contractor Company or lessor on a GSA contract and any related Subcontractor(s) company and Vendor(s). The term 'Contractor Personnel' refers to any Contractor personnel supporting GSA contracts. The Contractor and their Contractor Personnel shall comply with the Homeland Security Presidential Directive-12 (HSPD-12). HSPD-12 requires Federal agencies to issue standardized PIV credentials to Federal employees and contractors and use the credentials for access to Federal facilities and IT networks and systems.
- B. Refer to the Construction Contract Agreement Section III, Terms and Conditions, for HSPD-12 suitability investigation requirements for Contract employees requiring access to the facility. Also see <http://www.GSA.gov/HSPD12> for more security suitability requirements.
- C. GSA has full and complete control over granting, denying, withholding or terminating suitability determinations for Contractor Personnel supporting GSA contracts. GSA may authorize and grant temporary suitability to Contractor Personnel. A temporary or preliminary suitability determination by GSA does not guarantee that GSA will grant a favorable final suitability determination. A favorable temporary, preliminary or final suitability determination by GSA shall not prevent, preclude, or bar GSA from withdrawing or terminating a suitability determination.
  - 1. HSPD-12 establishes the minimum background requirements for GSA to issue an Access Card. GSA may require Contractor Personnel to obtain a higher background investigation level than the minimum required background investigation for an Access Card based on the Contractor Personnel's contract employment job duties.
  - 2. Contractor Personnel may be required to submit additional personnel information to other Government Agencies affected by the contract work and based on working within that Agency's space.
  - 3. The Contractor shall account for all GSA credentials issued to Contractor Personnel in connection with the performance under this contract. The Contractor Personnel shall immediately return credentials issued by GSA under any of the following conditions:
    - a. When the Contractor Personnel is no longer required for contract performance.
    - b. Upon completion of the Contractor Personnel's employment.
    - c. Upon contract completion or termination.
    - d. If the Contractor Personnel is removed from the contractor based on an unfavorable determination on any suitability check.
  - 4. It shall be the responsibility of the Contractor to return all credentials issued by GSA in accordance with the terms set forth in this specification. The Contracting Officer may delay final payment or execute an equitable adjustment under the contract, if the

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Contractor and their Contractor Personnel fail to comply with the requirements set forth in this specification.

5. The Contractor Personnel shall notify the GSA when credentials are lost. If the Contractor Personnel is determined to be negligent, the Contractor may be responsible for reimbursing the Government for its cost in issuing a replacement credential.

D. The following sections below apply to temporary, long-term and short-term contract workers.

1. "Temporary Contractors" are contractors who will be on the job site for 15 days or less during the course of the contract. The intent of temporary contractors is for emergency and exceptions only. Temporary contractors will not need to complete a security clearance to perform work on the contract. Temporary Contractors shall be escorted at all times while in non-public space and under the positive control and supervision of a Government Employee or Contractor with an active PIV card. Contractor employees will not be labeled as "temporary" in order to avoid having the contractor obtain the appropriate security clearance required for the work they will perform on the contract. Prior to any person being submitted as a temporary contractor, the will need to be reviewed and approved by the GSA Project Manager / COR.
2. A "Short Term Contractor" will be on the project 6 months or less and will apply for a SAC check. The contractor will submit the CIW, will complete the fingerprint and photograph (enrollment) requirement, and submit the OF-306 form to OMA to upload to the OPM Portal. Once the contract employee has completed the clearance process and all documents (CIW, Fingerprinted, Photographed, OF-306) have been accepted by OPM, the contract employee may access the facility as a visitor, and must comply with normal facility access control procedures, including sign-in, temporary badging, etc. The contract employee will be escorted in non-public areas of the facility. Once the Special Agency Check (SAC) letter is received, the contractor will no longer require an escort.
3. "Long Term Contractor" is hired to work for longer than 6 months. All contract employees requiring routine access to federally controlled facilities for more than 6 months or any access to Government information systems (Long term contract employees) shall undergo a suitability determination before a PIV identification card is issued. The contractor will complete the EQIP process submitting the CIW, enrollment, completing the EQIP questionnaire and receiving an Enter on Duty determination prior to being allowed to work on the project. Once the contract employee receives his Enter on Duty determination, he can access the facility as a visitor until his PIV card has been obtained. Once the Enter on Duty letter is received, the contract employee shall obtain their PIV card from the MSO credentialing access station and enter the facility as a government employee.
4. Failure of a long term contract employee to receive a favorable suitability determination shall result in their immediate removal from the contract and they shall not be allowed to work on any GSA contract.
5. The Contracting Officer or his/her designated representative shall provide the Contractor with required forms for obtaining necessary clearances. The Contractor shall be required to cause such completed forms to be returned to the Government for processing no later than fifteen (15) days following those initial forms and instructions being provided by the Government.

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6. The Contracting Officer or his/her designated representative shall ensure that the CIW completed for each applicant correctly reflects whether that applicant is a Short or Long-Term contractor by ensuring that the appropriate Type of Investigation Required selection is reflected in Block 4 of the CIW prior to submitting to OMA for security clearance initiation.
  7. The Contractor shall be responsible for planning and scheduling work in such a manner as to account for security clearance and facility access requirements.. The Contractor shall also be responsible to assure that employees and subcontractors hired to work on the contract complete all security clearance requirements in a timely and proactive manner. Difficulties encountered by the Contractor in assuring that an adequate number of employees and subcontractors have completed the security clearance requirements shall not be an excuse to the Contractor's ability to perform work under the Contract.
  8. Escorts are defined as employees and contractors who have received a favorable initial suitability decision and possess valid identification credentials (either a current PIV card or temporary badge and I-9 document). Escorts must maintain positive control (eye sight) of anyone under their supervision. Failure to comply will result in removal of individuals from the work site.
  9. GSA Office of Mission Assurance (OMA) is the managing entity for the processing of all Contractor Information Worksheet (CIW) forms. A template CIW form will be provided that includes information specific to this contract and shall be used for all individuals seeking an Enter on Duty (EOD) determination. After award, the Contractor will be contacted by the OMA (Zone A) staff to provide specific instructions and directions on the clearance process. It is the contractor's responsibility to manage its staff through this process; this includes, but is not limited to, all subcontractor personnel seeking an EOD determination.
  10. It is GSA's responsibility to control and verify all individuals who are cleared to enter government secured spaces and/or systems. It is the Contractor's responsibility to follow all requirements for security clearances. In order for GSA to control and verify that an individual needs clearance, the Contractor will be responsible for providing a list of workers (including the subs) who will be on the project. This list is known as the Requesting Official's (RO) list and will be used by the project team to verify individuals seeking the EOD determination. The contractor shall maintain and update the RO list. Anytime there's a change in the workforce (ie - workers come on or off) an updated list needs to be sent to Zone A. GSA will not process a CIW for an individual whose name is not on the RO list.
  11. The Period of Performance (PoP) for this contract accounts for a reasonable time frame to complete this security clearance process. It is the Contractor's responsibility to execute this security clearance process in a time efficient manner. Any delay associated with the security clearance process that is due to the applicant's inaction or negligence in completing the application with accurate information, will not be considered an excusable delay. Additionally, Notice to Proceed will not be held contingent on the completion of the security clearance process.
- E. The Contractor shall assign and dedicate a single Point of Contact (POC) for the overall control, management, and oversight of all suitability investigation applications for its employees including subcontractor applications. The Contractor POC must monitor the application process

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and follow-up to ensure that applicants respond to requested information and complete all required forms.

- F. Throughout the life of the contract, the Contractor shall maintain the listing of current/active personnel and their subcontractors' personnel that have received a favorable suitability investigation and/or have a GSA credential. The Contractor shall provide the Contracting Officer or their Designated Representative, an updated listing of current/active personnel or subcontractors' personnel when requested.
- G. The Contractor shall maintain a log book to be located on the project site. All contract workers shall sign in and out in the Contractor's Log Book on a daily basis. This log book shall remain the property of the GSA and shall be available for GSA inspection. All contract workers are required to sign into the daily log book without exceptions. Failure to sign in or out may result in immediate removal and /or termination.
- H. If the Contracting Officer receives an unsuitable report on any Contract Personnel after the processing their application, or if the GSA finds a prospective Contractor Personnel to be unsuitable or unfit for their assigned duties the Contractor POC shall be advised immediately by the Contracting Officer or their Designated Representative and/or the Security Officer that the Contractor Personnel cannot continue to work or be assigned to work under the contract. The Contractor must then take action to remove the Contractor Personnel from the GSA contract.
- I. Contractors and their staff will be required to comply with security regulations imposed by the occupying agency including any necessary clearances required for access to classified areas. Access to the project site will be limited to specific times established by the Government.
- J. After award of the Contract, all Contractor employees requiring access to classified areas shall be required to furnish information for security clearances and shall comply with security regulations as imposed by the occupying agency and defined in this section.
- K. For all contracting staff that has been successfully cleared, notify the Contracting Officer, or his designated representative, not less than 48 hours prior to performing work in a classified security area. Include the following:
  - 1. Companies: Name of each company performing the work.
  - 2. Employee names.
  - 3. Time: The exact time, date, and hours of work.
  - 4. Areas: Specific areas of the building in which work is to be performed.

## 1.2 GENERAL SECURITY REGULATIONS

- A. Security Regulations: All persons employed within the boundaries of the restricted-access areas therein, and all persons permitted to enter such property and areas shall comply with the security regulations that have been established for this Contract.
  - 1. The Contractor agrees on behalf of themselves and all subcontractors that the following security regulations will be observed by Contractor and subcontractor personnel on the

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- property. The Contractor shall make it a specific provision of his subcontracts that these regulations be accepted.
2. At the commencement of the work under this Contract, the following security facilities and procedures will apply for classified areas within the facility:
    - a. The Contractor shall provide information about all Contractor and subcontractor personnel and others who require continuing access to the site, before access is required and when access ceases.
    - b. Within 30 calendar days after the award of the Contract, the Contractor shall submit a list on the Contractor's letterhead stationary of all employees, subcontractors and their employees, and others who will perform work or otherwise require access to the classified area. Personnel shall be listed in alphabetical order by company. The list shall include their full.
    - c. The Contractor shall notify the Government in writing when personnel are no longer employed by the Contractor or a subcontractor that have been cleared.
    - d. In order to permit the Government to supply credentials, they shall follow the procedures for obtaining an HSPD-12 credential as outlined in the Construction Contract Agreement section of the solicitation.
    - e. The credential furnished by the Government to each Contractor employee or other person granted access to the classified area will serve to authorize the wearer to enter and leave the classified area. The credential must be worn so as to be clearly be visible at all times when on the work site. The credential will be retained by the individual as long as they require continued admittance to the classified area. The Contractor will arrange for the credentials immediate return to the Government when such need ceases. Temporary or visitor badges along with escorts will be provided for persons who are identified as having an infrequent or temporary legitimate business need for access to the classified area.
  3. At the commencement of the work under this contract, the following security procedures shall apply to the Contractor and all subcontractors.
    - a. Comply with the security regulations of the building.
    - b. Cameras are not permitted without written permission from the Occupant Agency and the Contracting Officer or his designated representative. If approved, permission will be granted in writing and will provide additional guidelines.
    - c. Personnel may be subject to inspection of their personal effects when entering and leaving the facility. In addition, unscheduled inspections of personnel may be made while on site.
    - d. In any work scheduled within the classified area is canceled, notify the Contracting Officer or his designated representative.
  4. The Government reserves the right to exclude or remove from the site or building any employee of the Contractor or a subcontractor whom the Government deems incompetent, careless, insubordinate or otherwise objectionable, or whose continued employment on the work is deemed by the Government to be contrary to the public interests. The Government further reserves the right to complete processing of the security documentation for personnel assigned to work within classified areas prior to access to such areas by the personnel.
  5. For overtime work within the classified area, the Contractor shall give the Contracting Officer or his designated representative at least 5 calendar days notice. This notice is required so that security escorts may be provided and is separate and distinct from any notices required for utility shutdown or other outages. Also, the Contractor shall notify the Government if personnel will not report to the job site on a particular day so that the security escort can be released for other duties.

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6. A detailed weekly schedule shall be submitted once a week by the close of business on the last day of the previous week's work for work planned within classified areas.. The schedule shall include the following:
  - a. Specific location of work for each trade.
  - b. Description of work for each trade.
  - c. Number of persons who will be on site for each location and trade.
  - d. Specific impacts required, such as equipment or utility shutdowns.
  - e. Hours of operation.

PART 2 - PRODUCTS (Not used)

PART 3 - EXECUTION (Not used)

END OF SECTION 015930

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**SECTION 01 10 00 – SUMMARY****PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including Federal Acquisition Regulations (FAR) and General Services Administration Acquisition Regulations (GSAR) contract clauses, General and Supplementary Conditions, and Division 01 Specification Sections, apply to this Section.

**1.2 PROJECT INFORMATION**

- A. Project Name and Location: Broadway Plaza Reconstruction and Roof Replacement, 26 Federal Plaza, New York, NY 10278.
- B. Project Summary Description:
  - 1. The Work includes removal and disposal of existing work and construction of new work, as shown on the drawings and specified, herein.
- C. Project Delivery Method: CMc-Construction Manager, as contractor
- D. Architect: TBD
- E. Structural Engineer: TBD
- F. Construction Manager as Advisor: TBD
- G. All roles will be delineated in writing by the Contracting Officer prior to or at the pre-construction conference.
- H. The Contracting Officer for the project is: Quentin Hamm, Contracting Officer, Acquisition Management Division, Operations Branch C (2PQC), GSA, Northeast and Caribbean Region; telephone 1-212-264-2626.

**1.3 WORK BY OTHER CONTRACTORS**

- A. The Contractor shall cooperate with other contractors performing related work, including providing labor, materials and other costs necessary to satisfactorily coordinate the Contract work with work performed under other contracts.

**1.4 SCHEDULE OF GOVERNMENT-FURNISHED PROPERTY**

- A. NA

## 1.5 MISCELLANEOUS PROVISIONS

- A. Work in existing facilities shall correspond in all respects with the existing conditions to which it connects, or to similar existing conditions, in materials, workmanship and finish.
  - 1. Unless otherwise indicated, existing structural members shall not be cut or altered without authorization by the Contracting Officer.
  - 2. Conditions remaining in place, which are damaged or defaced during the Work, shall be restored to the condition existing at time of award of Contract.
  - 3. Discolored or unfinished surfaces exposed by removal of existing conditions, that are indicated to be final exposed surfaces, shall be refinished or replaced as necessary to produce uniform and harmonious contiguous surfaces.
- B. Existing structures will remain in place, as indicated.
- C. Existing utility services with related meters and equipment will remain in place, unless otherwise noted.
- D. Removed items indicated to remain the property of the Government, shall be stored on site where directed by the Contracting Officer.

## PART 2 - PRODUCTS (Not Applicable)

## PART 3 - EXECUTION

- A. The Contractor shall prepare and submit a written plan detailing the sequence of actions to be taken by the Contractor to ensure the fire safety of the premises throughout the duration of all construction. The plan's contents shall be comprehensive including, but not limited to, the following:
  - 1. Description of existing fire protection systems and their active or inactive status.
  - 2. Description of the scope of and procedures for the removal of the fire alarm system from the work area, including:
    - a. Retention and maintenance of sprinkler monitoring and associated circuits in any area of the floor.
    - b. Verification actions, prior to demolition, to ensure that fire alarm devices or appliances in areas outside of the construction zone are not connected to circuits being demolished.
  - 3. Identification and scheduling of all hot work to be completed while the sprinkler system is active, including cutting, grinding, welding, etc.
  - 4. Sequence of abatement and demolition, including removal of existing sprinkler branch lines.
    - a. Procedures for preservation of the existing sprinkler loop and retention of active sprinkler system coverage outside the construction zone.
  - 5. Procedures for the maintenance of a fire watch once the sprinkler system in the construction zone is inactive. Describe implementation and enforcement of fire watch requirements, including New York City personal fitness certification for fire guard and fire watch procedures, in accordance with *GSA Fire Watch Guidelines*.
  - 6. Sequence of fire protection application to structural members, including the following:
    - a. Cleaning and preparation of structural steel and floor deck prior to the application of spray-applied fire resistive materials (SFRMs).

- b. Independent inspection of structural steel and floor deck to verify steel is ready to receive SFRMs.
- c. Application of bonding agent to structural steel covered with primer.
- d. Attachments of mechanical bonds to structural steel and to floor deck beneath electrical ducts and trench headers, as required by the UL Fire Resistance Directory.
- e. Installation of clips, hangers and attachments to structural steel and floor decks.
- 7. Procedures for the curing of SFRMs, including window removal, use of fans, etc.
  - a. Minimum fire watch duration of 30 days while SFRMs cure.
- 8. Procedures for the installation of clips, hangers and attachments after the application and curing of SFRMs, including:
  - a. Removal of SFRMs at points of connection.
  - b. Installation procedures.
  - c. SFRM repair procedures in compliance with the UL Fire Resistance Directory.
- 9. Fire protection procedures following SFRM curing:
  - a. Maintenance of fire watch, or
  - b. Installation of temporary heat detection system throughout work area, connected to building fire alarm system.
    - 1) Description of wireless detection system, if proposed.
- 10. Installation procedures for new sprinkler branch lines and ceiling grid.
- 11. Requirements for hydrostatic testing of sprinkler system and above-ceiling inspection.
- 12. Requirements for installation of ceiling-mounted fire alarm appliances and finished ceilings.
- 13. Requirements for activation of sprinkler system.
- 14. Requirements for the removal of the temporary heat detection system following inspection, testing and acceptance of fire alarm and sprinkler systems.

**END OF SECTION 01 10 00**

## SECTION 01 24 00 – OPTIONS

### PART 1 - GENERAL

#### 1.1 SUMMARY

A. “Option” means a unilateral right in a contract by which, for a specified time, the Government may elect to purchase additional scope of work, products, materials, equipment, systems or installation methods described in the Contract Documents.

B. The amount for an option is the total adjustment from the Base Bid to incorporate the option work into the project.

C. Option work shall include miscellaneous devices, accessory objects and similar items incidental to or required for a complete installation, whether or not mentioned as part of the option description.

### PART 2 - PRODUCTS (Not Applicable)

### PART 3 - EXECUTION

#### 3.1 SCHEDULE OF OPTIONS

**A. Option No. 1: Early Demolition Package**

As an option, for which separate and discrete line item costs shall be provided, at the onset of the design phase, an early demolition activity would be considered. If this option is exercised, the cost would be subtracted from the total GMP of the Base award. This option would include all temporary substructure support, complete removals of all existing materials and disposals, as required and necessary to fully expose all top of slab areas, including, but not limited to the slab conditions beneath the existing sculptures. The intention of this option is to fully expose the slab conditions, which would facilitate and define all design and repairs of concrete slabs, expansion joints, vertical surfaces, curbs and any and all related work.

**B. Option No. 2: Broadway & Worth Street Sidewalk Resurfacing**

Remove and replace sidewalk as shown in WASA Dwgs. Work shall also include removal and replacement of bollards along Duane, Broadway and Worth Streets to meet a minimum K-12 rating. Remove and replace guard booths.

**C. Option No. 3: Roof Replacement**

Remove all roofing membranes, insulation, drains, flashing, counterflashing, etc. down to structural slab. Assess and repair structural slab, and structural members below. Install new roofing membranes, insulation, drains, flashing, counterflashing to create a watertight system.

**END OF SECTION 01 24 00**

## SECTION 01 25 00 - SUBSTITUTION PROCEDURES

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. The Government is providing the references included in this subsection for information purposes only, and is not intended to provide a comprehensive, all-inclusive list of any and all potentially relevant portions of the Contract Documents.
- B. Drawings and general provisions of the Contract, including Federal Acquisition Regulations (FAR) and General Services Administration Acquisition Regulations (GSAR) contract clauses, General and Supplementary Conditions, and Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. Section includes administrative and procedural requirements for substitutions.
- B. Related Sections:
  - 1. Division 01 Section "Alternates" for products selected under an alternate.
  - 2. Division 01 Section "Product Requirements" for requirements for submitting comparable product submittals for products by listed manufacturers.
  - 3. Divisions 02 through 49 Sections for specific requirements and limitations for substitutions.

#### 1.3 DEFINITIONS

- A. Substitutions: Proposed changes to the Contract Documents by the Contractor for products, materials, equipment, and methods of construction.
  - 1. Substitutions for Cause: Changes proposed by Contractor that are required due to changed Project conditions, such as unavailability of product, regulatory changes, or unavailability of required warranty terms.
  - 2. Substitutions for Convenience: Changes proposed by Contractor or Owner that are not required in order to meet other Project requirements, but may offer advantage to Contractor or Owner.

#### 1.4 SUBMITTALS for Cause or Convenience:

- A. Substitution Requests: Per Division 01 Section "Submittal Procedures," submit electronic copies through ePM of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
  - 1. Documentation: Show compliance with requirements for substitutions and the following, as applicable:
    - a. Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by the Government and separate contractors that will be necessary to accommodate proposed substitution.

- b. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Include annotated copy of applicable specification section. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, sustainable design characteristics, energy and resource performance goals, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the Work specified.
  - c. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
  - d. Samples, where applicable or requested.
  - e. Certificates and qualification data, where applicable or requested.
  - f. List of similar installations for completed projects with project name, location and contact information of Owner and Contracting Officer of record.
  - g. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
  - h. Research reports evidencing compliance with building code in effect for project, when applicable for the proposed substitution.
  - i. Detailed comparison of Contractor's construction schedule using proposed substitution with products specified for the Work. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating date of receipt of purchase order, lack of availability, or delays in delivery. Provide a schedule fragnet with a time impact analysis to allow the Government to consider the proposed substitution.
  - j. Cost information, including a proposal of change, if any, in the Contract Sum.
  - k. Proposed substitution complies with requirements in the Contract Documents except as indicated in substitution request, is compatible with related materials, and is appropriate for applications indicated.
  - l. The Contracting Officer may require the Contractor to provide a contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.
2. The Contracting Officer or Contracting Officer's Representative (CO) or (COR) Action: If necessary, the Contracting Officer or COR will request additional information or documentation for evaluation. The Contractor shall be entitled to receive notice of action on submittals within a reasonable time, given the volume or complexity of the submittals and the criticality of the affected activities to Substantial Completion as may be indicated in the Project Schedule. The Contractor shall not be entitled to receive notice of action on submittals containing variations from Contract requirements in less than twenty working days.
3. Failure by the government to respond does not constitute acceptance of the proposed substitution.

## 1.5 QUALITY ASSURANCE

- A. Compatibility of Substitutions: Investigate and document compatibility of proposed substitution with related products and materials. Engage qualified testing agency to perform compatibility tests recommended by manufacturers.

## 1.6 PROCEDURES

- A. Coordination: Modify or adjust affected work as necessary to integrate work of the approved substitutions.

## PART 2 - PRODUCTS

### 2.1 SUBSTITUTIONS

- A. Substitutions for Cause: Submit requests for substitution immediately upon discovery of need for change, but not later than 21 days prior to time required for preparation and review of related submittals.
1. Conditions: The Contracting Officer (CO) will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, the Contracting Officer (CO) will return requests without action, except to record noncompliance with these requirements:
    - a. Requested substitution is consistent with the Contract Documents and will produce indicated results.
    - b. Substitution request is fully documented and properly submitted.
    - c. If requested substitution involves schedule impact Contractor has identified time impact and a mitigation plan.
    - d. Requested substitution has received necessary approvals of authorities having jurisdiction.
    - e. Requested substitution is compatible with other portions of the Work.
    - f. Requested substitution has been coordinated with other portions of the Work.
    - g. Requested substitution provides specified warranty.
    - h. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.
- B. Substitutions for Convenience: The Contracting Officer (CO) will consider requests for substitution if received within 60 days after the Notice to Proceed. Requests received after that time may be considered or rejected at discretion of the Contracting Officer (CO) or the Contracting Officer Representative (COR).
1. Conditions: The Contracting Officer will consider Contractor's request for substitution when the following conditions are satisfied.
    - a. Requested substitution offers the Government a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional obligations the Government incurs.
    - b. Requested substitution does not require extensive revisions to the Contract Documents.
    - c. Requested substitution is consistent with the Contract Documents and will produce indicated results.
    - d. Substitution request is fully documented and properly submitted.
    - e. If requested substitution involves schedule impact, Contractor has identified time impact and a mitigation plan.
    - f. Requested substitution has received necessary approvals of authorities having jurisdiction.
    - g. Requested substitution is compatible with other portions of the Work.
    - h. Requested substitution has been coordinated with other portions of the Work.
    - i. Requested substitution provides specified warranty.
    - j. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

PART 3 EXECUTION (Not Used)

**END OF SECTION 01 25 00**



## SECTION 01 26 13 – REQUESTS FOR INTERPRETATION

### PART 1 - GENERAL

#### 1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including Federal Acquisition Regulations (FAR) and General Services Administration Acquisition Regulations (GSAR) contract clauses, General and Supplementary Conditions and other Division 01 Specifications Sections, apply to this Section.

#### 1.02 SUMMARY

- A. This Section includes administrative and procedural requirements for requests for interpretation before and during construction.
- B. The form for Requests for Interpretation is included immediately following this Section.
- C. Related Work specified in other Sections includes:
  - 1. Submittals of RFIs by electronic means, Division 01 Section "Project Management and Coordination."
  - 2. Submittals of Applications for Payment are described in Division 01 Section "Payment Procedures."
  - 3. Submittals of test reports and certifications are specified in Division 01 Section "Quality Assurance and Control Requirements."
  - 4. Requirements regarding substitutions, product options, and color selections are described in Division 01 Section "Substitution Procedures."
  - 5. Submittals for project closeout are specified in Division 01 Section "Closeout Procedures."
  - 6. Requirements regarding shop drawings, product data, and samples are described in the various sections of these Specifications.

#### 1.03 REQUESTS FOR INTERPRETATION PRIOR TO START OF CONSTRUCTION

- A. Submit Requests for Interpretation (RFIs) to the Contracting Officer in written format when information is missing from the Contract Documents and other data available to the Contractor, or such information is ambiguous or in apparent conflict with other portions of the Contract Documents.
- B. Responses to RFIs prior to executing a Contract shall be distributed in the form of an Addendum, and made available to all who are bidding or negotiating for the work.

#### 1.04 REQUESTS FOR INTERPRETATION DURING CONSTRUCTION

- A. Requests for Interpretation (RFIs): Submit requests for interpretation to the Contracting Officer in writing when information is missing from the Contract Documents and other data available to the Contractor, or such information is ambiguous or in apparent conflict with other portions of the Contract Documents.

#### 1.05 PROCEDURES FOR REQUESTS FOR INTERPRETATION

- A. No extension of Contract Time will be authorized because of failure to transmit requests for interpretation to the Contracting Officer sufficiently in advance of the Work to permit processing.
- B. Requests for Interpretation shall be submitted only after the Contractor has thoroughly reviewed the Contract Documents and other data available to the Contractor, as required in the GENERAL CONDITIONS.
- C. RFIs shall be submitted in writing, and shall indicate which drawings, details, and specifications need clarification and exactly what interpretation or information is required. RFIs shall be sequentially numbered. If supplemental information is required, the Contractor shall clearly articulate the requirement.
  - 1. RFIs submitted electronically shall be in a file separate from an e-mail or other delivery method. Requests for interpretation contained within either a text message or the text of an e-mail, will be returned unanswered.
- D. If appropriate, RFIs shall include proposed solutions. When proposed solutions could result in additional cost to the Government, the RFI shall indicate the estimated amount. An RFI shall not constitute a formal request for change order.
- E. RFIs shall be submitted in the same format throughout the project. In addition to the information required above, each RFI shall indicate:
  - 1. Project Name.
  - 2. Sequential number of RFI.
  - 3. Date request is made.
  - 4. Name of the person or subcontractor who is making the request.
- F. RFIs shall be submitted at least 14 calendar days before the answer is required in the field. If, on rare occasion, an RFI requires a shorter response time it shall be specially marked as "Urgent" and shall, in addition to the information required in all RFIs, state the reason for providing a response sooner than 14 calendar days. The Contractor is responsible for reviewing Contract Documents and field conditions sufficiently in advance to avoid the use of Urgent RFIs.

#### 1.06 CONTRACTING OFFICER'S ACTION ON REQUESTS FOR INTERPRETATION

- A. The Contracting Officer shall review each RFI to determine whether it qualifies as an actual RFI within the meaning of this term. If the Contracting Officer determines that it is not a properly constituted RFI, it will be returned to the Contractor, unreviewed for content, and the Contractor shall immediately close the item. The Contractor may reconsider the inquiry, re-state or supplement it to meet the definition of a proper RFI and resubmit same for consideration as a new item. The Contracting Officer shall be the sole arbiter of the legitimacy of RFIs as submitted and the Contractor must abide by the Contracting Officer's decision. RFIs which request information which is available on drawings, details, specifications, and other Contract Documents or other data available to the Contractor shall be returned with a written response: "Not an RFI. No response necessary."
- B. The Contracting Officer will respond to RFIs in writing.
- C. RFIs marked "Urgent" will be reviewed by the Contracting Officer within the time period requested. If, in the Contracting Officer's determination, the reason given for urgent review is insufficient or could have been avoided by the Contractor, the Contracting Officer will so state in a separate response, and will respond to the RFI within the usual 14 calendar days.

- D. A response to an RFI does not authorize changes from the Contract Documents, nor does it authorize changes in the Contract Amount, unless so stated separately and in writing. In the event that a Contractor believes that a response to an RFI will cause a change to the requirements of the Contract Documents in terms of cost or schedule, the Contractor shall make immediate notice to the Contracting Officer stating same, in accordance with the notice provisions of the Contract Documents. Failure to give immediate notice will waive the Contractor's right to make claim for additional time or cost.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

**END OF SECTION 01 26 13**

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**SECTION 01 29 00 - PAYMENT PROCEDURES**

**PART 1 - GENERAL**

**1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including Federal Acquisition Regulations (FAR) and General Services Administration Acquisition Regulations (GSAR) contract clauses, General and Supplementary Conditions, and Division 01 Specification Sections, apply to this Section.

**1.2 SUMMARY**

- A. This Section specifies administrative and procedural requirements necessary to prepare and to process Requests for Payment.

**1.3 DEFINITIONS**

- A. Schedule of Values: A detailed written statement (MasterFormat/UniFormat) furnished by the Contractor outlining the portions of the contract sum, which allocates values (price & percentage) for the various parts of the work and used as the basis for payment application and reviewing progress payments. The Agreement provides further details.
- B. Request for Payment: A contractor's invoice and request for progress payment with substantiating information consistent with approved schedule of values.

**1.4 SCHEDULE OF VALUES**

- A. Coordination: Submit completed Schedule of Values no later than fourteen (14) calendar days prior to scheduled date of initial Requests for Payment.
- B. Schedules for Phased Work: Where the work is separated into phases, provide Schedules showing values correlated with each phase using the standard format referenced below.
- C. Format and Content: Contractor shall be responsible to complete the GSA Schedule of Values Workbook and compile the values into electronic Project Management (ePM) System. Contractor will enter values into workbook prior to ePM input and provide associated electronic baseline copy to contracting officer for record. Contractor will follow guidelines in the Schedule of Values workbook to support ePM upload.
  - 1. Identification: Complete the following Project Identification fields in the Schedule of Values:
    - a. Project Name
    - b. Project Number
    - c. Project Location, City, State
    - d. Base Contract Number
    - e. Task Order Number
    - f. Modification Number
    - g. GSA Project Manager
    - h. Contractor's Name and contact information
    - i. Date of submittal

2. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Requests for Payment and progress reports.
  - a. Work activity – (by division or specific work activity)
  - b. Dollar value of each specific work activity – both with an amount in dollars and whole cents, and as a percentage of the Contract Sum to nearest one-hundredth percent. Adjust the amounts to total to the Contract Sum and the percentages to total 100 percent.
  - c. Each item in the schedule of values and Requests for Payment shall be complete. Include total cost and proportionate share of general overhead and profit for each item. (i.e. no stand-alone item for Overhead and Profit)
  - d. Modifications that affect value.
  - e. Update affected work branches and subordinate line items and
  - f. resubmit the schedule of values before the next Request for Payment when Modifications result in a change in the Contract Sum
  - g. Line item for mobilization and demobilization
  - h. Line item for close out (% to be negotiated with GSA COR)
3. Options: Provide a separate Schedule of Values for each exercised Option.
4. Each item in the Schedule of Values and Requests for Payment shall be complete. Temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown either as separate line items in the schedule of values or distributed as general overhead expense, at the government's option.
5. Revise and update workbook in ePM with all items affecting scope, schedule or cost and resubmit within 14 calendar days as coordinated with project manager or contracting officer. Contractor shall provide a final as-built schedule at project completion. Update affected work branches and subordinate line items and resubmit the schedule of values before the next Request for Payment when Modifications result in a change in the Contract Sum

#### 1.5 REQUESTS FOR PAYMENT

- A. Requirements for Requests for Payment are in Section III, Terms and Conditions of the Agreement.
- B. Each Request for Payment following the initial Request for Payment shall be consistent with previous Requests.
  1. Initial Request for Payment, Request for Payment at time of Substantial Completion, and final Request for Payment involve additional requirements.
- C. Payment Request Times: Submit Request for Payment to GSA by the fifth (5<sup>th</sup>) day of the month. The period covered by each Request for Payment is one month, ending on the last day of the month.
  1. Submit one electronic draft copy (aka pencil copy) of Request for Payment to the CO or enter in ePM along with construction progress report seven days prior to due date for review by GSA. Provide documentation evidencing the cost of work performed to be included in the Request for Payment. Resolve questions resulting from GSA review of draft Request for Payment and construction progress report prior to submitting Request for Payment.
- D. Request Preparation: All payments must be executed by a person authorized to legally bind the Contractor.
  1. Entries shall match data on the schedule of values and Contractor's construction schedule. Use updated schedules if revisions were made.
  2. Include amounts for work completed following effective date of previous Request for Payment, whether or not payment has been received. Include only amounts for work completed as of effective date of current Request for Payment.

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3. Include amounts of Modifications issued before last day of construction period covered by Request.
- E. Stored Materials: Differentiate between items stored on-site and items stored off-site.
1. Provide certificate of insurance, and consent of surety to payment, for stored materials.
  2. Provide supporting documentation that verifies amount requested, such as paid invoices. Match amount requested with amounts indicated on documentation.
  3. Provide summary documentation for stored materials indicating the following:
    - a. Value of materials previously stored and remaining stored as of effective date of previous Request for Payment.
    - b. Value of previously stored materials put in place after effective date of previous Request for Payment and on or before effective date of current Request for Payment.
    - c. Value of materials stored since effective date of previous Request for Payment and remaining stored as of effective date of current Request for Payment.
- F. Initial Request for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Request for Payment include the following:
1. List of subcontractors.
  2. Schedule of values.
  3. Contractor's construction schedule per Agreement (startup if not final).
  4. Products list (preliminary if not final).
  5. Sustainable design submittal for project materials cost data.
  6. Sustainable design action plans.
  7. Schedule of unit prices.
  8. Submittal schedule (preliminary if not final).
  9. List of Contractor's staff assignments.
  10. List of Contractor's principal consultants.
  11. Copies of building permits.
  12. Copies of authorizations and licenses from authorities having jurisdiction for performance of the Work.
  13. Initial progress report.
  14. Report of preconstruction conference.
- G. Request for Payment at Substantial Completion: After GSA issues the Notice of Substantial Completion, submit a Request for Payment less previous payments made for portion of the Work claimed as substantially complete.
1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
  2. This Request shall reflect Notices of Substantial Completion issued previously for GSA occupancy of designated portions of the Work.
- H. Final Payment Request: The Agreement provides further details.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

**END OF SECTION 01 29 00**

## SECTION 01 30 00 - ELECTRONIC PROJECT MANAGEMENT (ePM) SYSTEM

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including Federal Acquisition Regulations (FAR) and General Services Administration Acquisition Regulations (GSAR) contract clauses, General and Supplementary Conditions, and Division 01 Specification Sections, apply to this Section.

#### 1.2 PURPOSE

- A. The Contractor shall use GSA's web-based electronic Project Management (ePM) system, which is a fully configured version of Meridian Systems' Proliance Construction Management Software. Click on this link for the ePM minimum requirements:  
<https://insite.gsa.gov/portal/category/517870>

#### 1.3 DEFINITION

- A. .ePM is a web-based project management tool which provides GSA's Public Buildings Service with an automated workflow, collaboration, document management and project management solution to help manage GSA design and construction projects. ePM is integrated with GSA's gBUILD (Green Building Upgrade Information Lifecycle Database) to share project creation and data storage information.

#### 1.4 PROJECT COLLABORATION AND DOCUMENTATION

- A. General
  - 1. The Contractor shall effectively manage the ePM database, including maintaining adequate staffing levels and ensuring that personnel attend the mandatory GSA-provided training sessions.
  - 2. The Contractor shall use ePM to upload, store, capture, preserve, record, maintain, update, and route all project-related documentation to comply with GSA's Document Security Requirements. Classified material is not permitted to be stored in this system.
  - 3. The Contractor shall use the workflow processes contained within ePM to submit and receive approval for all project deliverables.
  - 4. The Contractor shall continuously monitor and review ePM to ensure the Contractor data is current through completion of the Closeout Phase of Construction.
  - 5. The Contractor is required to store documents from their subcontractors and vendors in ePM. If a subcontractor or vendor does not obtain an ePM license, the contractor will be responsible for uploading and processing documents in ePM on their behalf.

- B. Contents of ePM

1. The Contractor shall use ePM as the electronic filing cabinet for all project-related correspondence and submittals. The Contract Documents specify certain documentation that the Contractor shall provide during performance of the Contract. For the avoidance of doubt, and unless specifically stated otherwise in the Contract Documents, in addition to any documentation that the Contractor submits to GSA as set forth in the Contract Documents. The current ePM Minimum Requirements can be found at: <http://www.gsa.gov/epm>.

## 1.5 SCHEDULING REQUIREMENTS

- A. The Project Schedule shall be produced using widely used, commercially-available computer software that is capable of generating and monitoring a CPM schedule, and is compatible with Meridian Proliance®.

## 1.6 EQUIPMENT AND TRAINING

- A. Equipment
  1. GSA will not furnish any equipment related to accessing ePM. ePM is web-accessible, and can therefore be accessed via any computer with an Internet connection. For up-to-date ePM desktop requirements: <http://www.gsa.gov/epm>.
- B. ePM Training
  1. GSA will provide no-cost training to familiarize team members with the ePM system. The GSA Project Manager will ensure that appropriate personnel should attend training, and what roles they will be set up within the system based on their project responsibilities.
- C. ePM Support
  1. GSA will provide ePM system administration and end user support, for the duration of the project.

## 1.7 PERSONNEL REQUIREMENTS

- A. An HSPD-12 security clearance is required to access ePM. Project Team members without an HSPD-12 clearance will need to work with the GSA Project Manager to initiate the clearance process, and request a temporary waiver for ePM access until clearance can be confirmed. A waiver means that once the individual's HSPD-12 clearance is confirmed, an ePM username and password will be provided. For up-to-date GSA HSPD-12 information: [www.gsa.gov/hspd12](http://www.gsa.gov/hspd12). Obtaining clearances vary in length and may take time to receive them.

## 1.8 DATA OWNERSHIP

- A. GSA shall retain ownership of all data entered into the system and shall administer all information contained therein, and distribution of any system data shall be made upon request.



## 1.9 DOCUMENT SECURITY

- A. ePM security access levels ensure that sensitive documents can only be accessed by the appropriate personnel. It is the Contractor's responsibility to ensure their employees, subcontractors and vendors have the appropriate level of security to ensure document security.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

**END OF SECTION 01 30 00**

## SECTION 01 31 00 - PROJECT MANAGEMENT AND COORDINATION

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including Federal Acquisition Regulations (FAR) and General Services Administration Acquisition Regulations (GSAR) contract clauses, General and Supplementary Conditions, and Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. This section includes certain administrative provisions for managing and coordinating construction operations, including but not limited to the following:
  - 1. General project coordination.
  - 2. Coordination drawings.
  - 3. Conservation.
  - 4. Administrative and supervisory personnel.
  - 5. Conferences and meetings.
  - 6. Utility service interruptions.
  - 7. Cleaning and protection.

#### 1.3 GENERAL PROJECT COORDINATION

- A. Coordination of Trades: Coordinate construction operations included in the various sections of the Specifications to provide an efficient and orderly installation of each part of the Work. Coordinate construction operations included under different sections of the Specifications that depend on each other for proper installation, connection or operation. Keep pipes, ducts, conduit, and the like as close as possible to ceiling slab, walls, and columns to take up a minimum amount of space. Locate pipes, ducts, and equipment so that they do not interfere with the intended use of eyebolts and other lifting devices. Assure all controls can be reached and operated.
  - 1. Schedule construction operations in the sequence required to obtain the best results where the installation of one part of the Work depends on installation of other components before or after that part.
  - 2. Coordinate installation of different components to provide maximum accessibility for required maintenance, service, testing and repair.
  - 3. Minimize roof penetrations.
- B. Notification: Prepare and distribute memoranda to each party involved, outlining special procedures required for coordination. Include notices, reports and meeting minutes as part of the memoranda.
- C. Administrative Procedures: Coordinate scheduling and timing of administrative procedures with other construction activities to avoid conflicts and promote orderly progress of the Work. Administrative procedures include but are not limited to the following:
  - 1. Preparation of schedules.
  - 2. Installation and removal of temporary facilities.

3. Security packages and systems by others (i.e. U.S. Marshals Service (USMS), Federal Protective Service (FPS), tenants, etc.)
4. Audio Visual (AV) and technology requirements and packages for tenants and/or end users.
5. Telecommunication, data, internet and other tele-work systems for GSA, tenants and/or end users.
6. Delivery and processing of submittals.
7. Progress meetings.
8. Project closeout activities.
9. Startup and adjustment of systems.

#### 1.4 COORDINATION DRAWINGS

- A. Prepare coordination drawings and/or BIM model and data where coordination is needed for installation of products and materials fabricated by separate entities, and prepare coordination drawings where limited space availability necessitates maximum use of the space for efficient installation of different components.
  1. Show the relationship of components from the separate shop drawings. Indicate functional and spatial relationships of components of architectural, structural, civil, mechanical, and electrical systems.
  2. Indicate required installation sequences.
  3. Indicate minimum access space requirements for routine maintenance and for anticipated replacement of components during the life of the installation.
  4. Show locations and sizes of all access doors on vertical and horizontal surfaces throughout the facility.
  5. Provide vertical and horizontal dimensions necessary to locate each component and avoid conflicts within the space.
  6. Comply with shop drawing requirements for sheet size and submittal methods specified in Division 01 Section "Submittal Procedures."
- B. Refer to Division 22, Plumbing; Division 23, Heating Ventilating and Air Conditioning; and Division 26, Electrical for specific coordination drawing requirements for mechanical and electrical installations.
- C. Provide coordination drawings for equipment and system installations in mechanical and electrical rooms and spaces where two or more entities will provide the work and separate shop drawings are insufficient to show coordination.
- D. Work installed prior to approval of coordination drawings shall be at the Contractor's risk. Subsequent relocations required to avoid interferences shall be made without additional expense to the Government. In case interference develops, the Government will decide which work shall be relocated, regardless of which was installed first.
- E. Digital Data Files of Coordination Drawings: Prepare coordination digital data files in accordance with the following requirements:
  1. File Preparation Format: Same digital data software program, version, and operating system as the original Drawings.
  2. File Submittal Format: Same digital data software program, version, and operating system as the original Drawings and Portable Document Format (PDF).

#### 1.5 CONSERVATION

- A. Coordinate conservation of energy, water and materials in the conduct of construction operation. Salvage materials and equipment involved in the performance of, but not incorporated into, the Work.
- B. Comply with Green Purchasing Plan requirements.
- C. Waste Management Plan: Establish a program to maximize recycling of waste materials. Program shall include the following:
  - 1. Designation of a waste management coordinator.
  - 2. Identification of recyclable materials.
  - 3. Identification of available local recycling firms and agencies to receive recyclable materials.
  - 4. Establishment of quantity goals for collection of each recyclable material.
  - 5. Designation of one or more locations on the project site for collection, sorting and temporary storage of recyclable materials.
  - 6. Means and schedule for transporting and delivery of recyclable materials to recycling firms and agencies.
  - 7. Implementation of the Waste Management Plan: Contractor's waste management coordinator shall provide on-site instruction of workers in the identification, separation and handling of recyclable materials, and shall manage the process for the duration of the Contract.
    - a. Contractor shall lay out and define specific areas to facilitate separation of materials for recycling, and shall maintain collection bins clearly marked to avoid contamination of the recyclable materials.
    - b. The waste management coordinator shall report monthly, in writing, the quantity of each recyclable material collected during the previous month and cumulatively to date, compared to the quantity goal, and other points of interest. Copies of each report shall be distributed to each significant stakeholder of the project, including the Government.

#### 1.6 ADMINISTRATIVE AND SUPERVISORY PERSONNEL

- A. The Contractor shall provide administrative and supervisory personnel for proper performance of the Work.
- B. Project Coordinator: Provide a full-time project coordinator, experienced in the administration and supervision of building construction, including all systems required in the project. The project coordinator shall be authorized to act as the coordinator of construction activities, including but not limited to the following:
  - 1. Scheduling and sequencing of Work.
  - 2. Sharing access to work spaces.
  - 3. Installations.
  - 4. Protection of work.
  - 5. Cutting and patching.
  - 6. Selections for compatibility.
  - 7. Preparation of coordination of drawings.
  - 8. Inspection and tests.
  - 9. Temporary services and facilities.
- C. Safety and Health Officer: Provide a safety and health officer whose duties shall consist of developing and implementing safety and health programs specified in Division 1 Section "Safety and Health."

- D. Provide a waste management coordinator, whose duties shall consist of developing and implementing a program for maximizing recycling of waste.
- E. Add additional staff and respective duties as necessary for your specific project.
  - 1. Mechanical Electrical Plumbing (MEP) Coordinator
  - 2. Commissioning Coordinator
  - 3. Systems/IT Coordinator

## 1.7 CONFERENCES AND MEETINGS

- A. Preconstruction Conference: The government shall schedule a preconstruction conference before starting construction at a time and place convenient to the Contractor. The conference shall review responsibilities and personnel assignments.
  - 1. Attendees: Participants at the conference shall be familiar with the project, shall be authorized to conclude matters relating to the Work, and shall minimally include representatives of the following parties:
    - a. Government.
    - b. Architect.
    - c. Major design consultants.
    - d. Construction Manager.
    - e. Contractor.
    - f. Major subcontractors.
    - g. Major suppliers.
    - h. Other concerned parties.
  - 2. Agenda: Subjects for discussion shall include items of significance that could affect progress, including but not limited to the following:
    - a. Tentative construction schedule.
    - b. Critical work sequencing.
    - c. Designation of responsible personnel.
    - d. Procedures for processing field decisions and Change Orders.
    - e. Procedures for processing Applications for Payment.
    - f. Distribution of Contract Documents.
    - g. Submittal of Shop Drawings, Product Data and Samples.
    - h. Preparation of Record Documents.
    - i. Use of the premises.
    - j. Parking availability.
    - k. Office, work and storage areas.
    - l. Equipment deliveries and priorities.
    - m. Safety procedures.
    - n. First aid.
    - o. Security.
    - p. Housekeeping and progress cleaning.
    - q. Working hours.
    - r. Energy and resource efficiency / sustainability.
    - s. Waste management.
    - t. Commissioning.
- B. Progress Meetings: The Government or designee shall conduct progress meetings at the Project Site at weekly intervals. Other specialty meeting may be called as the need arises.

1. Attendees: In addition to the Contractor's and Government representatives, each subcontractor, supplier, or other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented. All participants at the conference shall be familiar with the Project and authorized to conclude matters relating to the Work.
  2. Agenda: Review and correct or approve minutes of the previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to the status of the Project.
    - a. Contractor's Construction Schedule: Review progress since the last progress meeting. Determine where each activity is in relation to the Contractor's Construction Schedule, whether on time or ahead or behind schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time. Provide two (2) week schedule look-ahead.
    - b. Review the present and future needs of each entity present, including but not limited to the following:
      - 1) Interface requirements.
      - 2) Time.
      - 3) Sequences of operations.
      - 4) Status of submittals.
      - 5) Deliveries.
      - 6) Off-site fabrication.
      - 7) Access.
      - 8) Site utilization.
      - 9) Temporary facilities and controls.
      - 10) Hours of work.
      - 11) Hazards and risks.
      - 12) Housekeeping and progress cleaning.
      - 13) Quality and work standards.
      - 14) Change Orders.
      - 15) Documentation of information for payment requests.
      - 16) Updating of Record Documents.
  3. Schedule Updating: The Contractor shall revise the Contractor's Construction Schedule after each progress meeting where revisions to the schedule have been made or recognized. The revised schedule shall be issued concurrently with the report of each meeting.
- C. Project Closeout Conference: GSA will schedule and conduct a Project closeout conference, at a time convenient to Contractor, CM and Architect, but no later than 90 days prior to the scheduled date of Substantial Completion.

Attendees: Authorized representatives of GSA, CM, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the meeting. Participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.

1. Agenda: Discuss items of significance that could affect or delay Project closeout, including the following:
  - a. Preparation of record documents.
  - b. Procedures required prior to inspection for Substantial Completion and for final inspection for acceptance.
  - c. Coordination of final commissioning requirements and submittal of written warranties.

- d. Requirements for completing sustainable design documentation.
  - e. Requirements for preparing operations and maintenance data.
  - f. Requirements for delivery of material samples, attic stock, and spare parts.
  - g. Requirements for demonstration and training.
  - h. Preparation of Contractor's punch list.
  - i. Procedures for processing Applications for Payment at Substantial Completion and for final payment.
  - j. Submittal procedures.
  - k. Coordination of separate contracts, if any.
  - l. GSA's partial occupancy requirements.
  - m. Installation of GSA's furniture, fixtures, and equipment.
  - n. Responsibility for removing temporary facilities and controls.
2. Minutes: Entity conducting meeting will record and distribute meeting minutes within 3 working days. Meeting Minutes should be uploaded or documented within ePM.

## 1.8 UTILITY SERVICE INTERRUPTIONS

- A. Utility Service Interruption Plan: Within sixty (60) calendar days from Notice to Proceed (NTP), Contractor shall submit a utility service interruption plan for the project. Plan shall include dates and times of each scheduled interruption, with estimated period of outage, list of existing equipment that will be affected by the interruption, proposed sequence of equipment shut-down and start-up, and responsible personnel.
1. Keep interruptions and periods of interruption to a minimum.
  2. Schedule interruptions during times when the facility is unoccupied.
  3. Plan must be approved in writing by the Building Manager and the Government or the Government's representative. If not approved, consult with the Building Manager, and revise and resubmit the plan until approved.
- B. Coordination of Interruptions: Sufficiently in advance of each scheduled utility interruption, the Contractor shall issue a notice to all affected parties, confirming each provision of the interruption, or canceling and rescheduling. Coordinate with the Building Manager and Government's representative, and confirm that the responsible personnel are prepared to execute the shut-down and start-up of affected existing equipment, prior to each interruptions.

## 1.9 SUBMITTALS

- A. Subcontract List: Within seven (7) calendar days from Notice to Proceed (NTP), prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Include the following information in tabular form:
1. Name, address, and telephone number of entity performing subcontract or supplying products.
  2. Number and title of related Specification Section(s) covered by subcontract.
  3. Drawing number and detail references, as appropriate, covered by subcontract.
  4. Coordination Drawings: Comply with the shop drawing requirements specified in Division 01 Section "Submittal Procedures".
- B. Waste Management: Within fourteen (14) calendar days after commencement of construction, submit the waste management plan, followed by monthly implementation reports.

- C. Staff Names: Within seven (7) calendar days after commencement of construction, submit a list of principal staff assignments, including the superintendent and other primary personnel at the Project site. Identify individuals by name, duties and responsibilities, home address, and business and home telephone numbers.
  - 1. Post copies of this list in ePM, in the project meeting room, temporary field office and at each temporary telephone location.
- D. Utility Service Interruptions: No later than thirty (30) calendar days prior to the first planned interruption, submit the utility service interruption plan, followed by confirmed scheduled shut-down notices at least 3 calendar days prior to each interruption.

PART 2 - PRODUCTS (Not applicable)

PART 3 - EXECUTION

3.1 GENERAL COORDINATION PROVISIONS

- A. Inspection of Conditions: Prior to installations, require the installer of each major component to inspect both the substrate and conditions under which work is to be performed.
  - 1. Do not proceed until unsatisfactory conditions have been corrected in an acceptable manner.
  - 2. Coordinate temporary enclosures with required inspections and tests to minimize the necessity of uncovering completed construction for that purpose.
- B. Construction in Progress: Keep construction in progress, and adjoining materials in place, clean during handling and installation. Apply protective coverings where required for protection from damage or deterioration.
- C. Completed Construction: Clean completed construction, and provide maintenance, as frequently as necessary to prevent damage or soiling or other deterioration through the remainder of the construction period. Adjust and lubricate operable components as necessary to assure operability without damage.
- D. Limiting Exposures: Supervise construction operations to prevent exposure of any part of construction, completed or in progress, to harmful, dangerous, damaging or otherwise deleterious conditions during the construction period. Such conditions include but are not limited to the following:
  - 1. Excessive static or dynamic loading.
  - 2. Excessive internal or external pressures.
  - 3. Excessively high or low temperatures.
  - 4. Thermal shock.
  - 5. Excessively high or low humidity.
  - 6. Pollution and air contamination.
  - 7. Water or ice.
  - 8. Chemicals and solvents.
  - 9. Light.
  - 10. Radiation.
  - 11. Puncture.
  - 12. Abrasion.



13. Heavy traffic.
14. Soiling, staining, and corrosion.
15. Bacteria.
16. Rodent and insect infestation.
17. Combustion.
18. Electrical current.
19. High-speed operation.
20. Improper lubrication.
21. Unusual wear or other misuse.
22. Contact between incompatible materials.
23. Destructive testing.
24. Misalignment.
25. Excessive weathering.
26. Unprotected storage.
27. Improper shipping or handling.
28. Theft or vandalism.

**END OF SECTION 01 31 00**

## SECTION 01 31 20 - CRITICAL PATH METHOD SCHEDULING

### PART 1 - GENERAL

#### 1.01 SUMMARY

- A. The Contractor shall use a CPM Project Schedule to plan, coordinate, and perform the Work. The Project Schedule shall be a rational, reasonable and realistic plan for completing the Work, and conform to requirements specified in this specification section and elsewhere in this Contract. The Project Schedule shall depict all activities necessary to complete the Work, including, as applicable, all submittal and submittal review activities, all procurement activities, and all field activities, including mobilization, construction, start-up, testing, balancing, commissioning, and punch-list. Activities shall be sufficiently detailed and limited in duration to enable proper planning and coordination of the Work and allow effective evaluation of the reasonableness and realism of the Project Schedule, accurate monitoring of progress, and reliable analysis of schedule impacts.
- B. Regularly update and upload schedule to ePM.
  - 1. Upload PDF of schedule every month.
  - 2. Upload P6 (or other electronic scheduling software) every month.
  - 3. Cost Loaded schedule updated every month, and tie with schedule of values to create curve.
- C. The purpose of the Project Schedule shall be to:
  - 1. Plan the project and communicate that plan.
  - 2. Provide the status and forecast the timely completion of the work.
  - 3. Record the actual start dates, actual finish dates and actual sequence of the work.
  - 4. Ensure adequate planning, staffing, scheduling and reporting during execution of the Work by the Contractor;
  - 5. Ensure coordination of the Work among all affected parties;
  - 6. Assist the Contractor and GSA in the preparation and evaluation of the Contractor's monthly progress payments; and
  - 7. Assist the Contractor and GSA in monitoring the progress of the work, and evaluating proposed changes to the Contract and/or requests for additional time to Project Completion.

#### 1.2 SCHEDULER REQUIREMENTS / QUALIFICATIONS

- A. Within five (5) Working Days after the Contractor receives Notice to Proceed (NTP) from the Contracting Officer (CO), the Contractor shall provide written notice to the CO naming a scheduling representative in the Contractor's organization who shall be responsible for coordinating with the GSA during the preparation and maintenance of the Project Schedule. The Contractor's scheduling representative shall have authority to act on behalf of the Contractor in fulfilling the Project Schedule requirements of the Contract.
- B. The Contractor's scheduler shall possess a minimum of **10** years experience in CPM scheduling on projects of similar size, scope, and complexity of the one specified in the Contract Documents.
- C. The Contractor's scheduler shall also have taken, and provide provide proof of, at least one CPM training class within the past 5 years. If the Contracting Officer rejects the proposed scheduling representative, the Contractor shall submit a different candidate, at no additional cost to the Government. The Contractor shall not change the scheduling representative without the prior

written consent of the Contracting Officer.

- D. The Contractor agrees that if the Contracting Officer provides written notice to the Contractor that the scheduling representative is not performing the duties to the satisfaction of the Government, the Contractor shall change such representative at no additional cost to the Government. Within ten Working Days of receipt such written notice, the Contractor shall propose a new scheduling representative for approval by the Contracting Officer. Until the Contracting Officer approves of any such replacement, the Government reserves the right to reject any Project Schedule.

### 1.03 RELATED SECTIONS

- A. The Government is providing the references included in this subsection for information purposes only and is not intended to provide a comprehensive, all-inclusive list of any and all potentially relevant portions of the Contract Documents. Drawings and general provisions of the Contract, including Federal Acquisition Regulations (FAR) and General Services Administration Acquisition Regulations (GSAR) contract clauses, General and Supplementary Conditions, and Division 01 Specification Sections, apply to this Section as if repeated herein.
- B. Division 01 Section "Payment Procedures."
- C. Division 01 Section "Construction Progress Documentation."
- D. Division 01 Section "Electronic Project Management (ePM) System."

### 1.04 DEFINITIONS

- A. Definitions applicable to this Section include the following:
1. **Activity** - An element of the Work or task performed during the course of the project. Each schedule activity shall be a clearly defined, manageable and monitorable task depicting an estimated duration and an estimated cost. Each activity shall be limited to one trade unless the GSA specifically approves otherwise on an exception basis.
  2. **Baseline Schedule** - The original work plan approved by GSA as the Project Schedule depicting the contractor's plan to prosecute the work.
  3. **Constraint** - A scheduling restriction imposed on the start, finish or float of an activity. No constraints will be allowed. Exception: for projects with limited or no storage areas requiring "just in time" deliveries, a zero free float may be acceptable.
  4. **Critical Path** - The Project critical path is defined as the longest, continuous path of interrelated activities depicting project work from Notice-To-Proceed (NTP) to project completion. All reports and graphics indicating the Critical Path shall depict the longest path of interrelated activities. Unless otherwise approved by GSA, the Baseline Schedule Critical Path shall use all allotted Contract time. The contractor has the right to develop a schedule that forecasts an early finish. However, all time between the forecasted early finish of substantial completion and the contractual substantial completion date shall be shown as float and shall be available to the Project team.
  5. **Critical Path Method (CPM)** - A scheduling technique using activities, durations, and interrelationships/dependencies (logic), such that all activities are interrelated with logic ties from the beginning of the project to the completion of the project. There shall be no open ended relationships in the schedule. All activities shall have at least one successor with a finish relationship ("finish to start" or "finish to finish") except the last activity in the network.

6. **Data Date** - The date to which progress is updated. In most scheduling software, the data date represents the next day of work and all progress is updated through the day prior to the data date.
7. **Float** – is the difference between the forecasted early dates and the forecasted late dates; the amount of time an activity can be delayed without delaying the Substantial Completion Date. Float is considered a project commodity jointly shared between GSA and the Contractor and shall be used in the best interest of completing the Project on time. The critical path is not dependent on float. Float is calculated after the critical (longest) path has been determined.
8. **Float Suppression** – the masking of available float through the use of constraints, unreasonable logical relationships or unreasonable durations. Float suppression techniques are not allowed. On an exception basis, the use of a zero free float constraint to depict “just in time” deliveries on projects with little or no storage might be acceptable.
9. **Fragnet** - A subset group of interrelated activities representing only a portion of the CPM schedule.
10. **Network Plan** - The Network Plan is the entire database of activities, logic, durations, and all items relating to any activity input into the scheduling software and is the complete representation of the Project Schedule prepared using the Critical Path Method and graphically shown in a time-scaled form. The network shows the sequence and interdependence of the activities, and planned and actual progress by activity, required for complete performance of the Work.
11. **Project Schedule** - The Project Schedule includes the Preliminary Schedule (submitted at bid or as determined by the CO), the approved Baseline Schedule (developed based on the Preliminary Schedule), and all subsequent Schedule Updates, Schedule Revisions, Recovery Schedules, and As-Built Schedule.
12. **Recovery Schedule** – A schedule depicting the Contractor's plan for recovery of time lost on the project.
13. **Schedule Revision** - A schedule in which the plan for the work is revised. A Schedule Revision is required when the current schedule no longer represents the actual or planned prosecution of the Work.
14. **Schedule Update** - A schedule in which only actual start dates, actual finish dates and duration percent complete is updated from the prior data date to the current data date. No revisions will be permitted in a Schedule Update (i.e. added activities, deleted activities, logical relationships, etc.).
15. **Time Impact Analysis** - A technique to demonstrate the effect of a schedule revision or proposed revision against the current approved Project Schedule.
16. **Total Float** - The amount of time an activity (or chain of activities) can be delayed without affecting the Project Substantial Completion Date.
17. **Working Day** - A Working Day is a calendar day scheduled for active prosecution of the work.

#### 1.05 CRITICAL PATH METHOD SCHEDULE

- A. Provide a detailed, time-scaled computer generated Project Schedule with activities representing each portion of the Work for the entire Contract Performance Period. The Project Schedule shall use the Critical Path Method (CPM) for the planning, scheduling and reporting of the work to be performed under the contract.
- B. No unspecified constraints, float suppression techniques, or use of activity durations, logic ties and/or sequences deemed unreasonable by GSA shall be used in the Project Schedule.

- C. As defined by the Contract, the entire project performance period shall establish the Project Substantial Completion Date which shall be used in the planning and presentation of the Contractor's Project Schedule. GSA reserves the right not to approve any schedule deemed to have an unrealistic forecasted Substantial Completion Date. Government approval of an early completion Project Schedule shall not modify the Contractual Substantial Completion Date or Project Completion Date. The time difference between the Contractor's planned Substantial Completion Date and the Contract directed Substantial Completion Date shall be considered Project Float, jointly owned and for the mutual use of both the Contractor and GSA.
- D. The Contractor shall provide the computer processing of the CPM schedule and graphics required under this Section or as requested by GSA, in electronic format to GSA throughout the entire project performance period until Project completion is achieved.
- E. Include contractual milestone events as defined in the Contract Documents including, but not limited to, phased work, work restrictions/access/shift work, and work being performed by separate contractors. The Contractor is prohibited from assigning milestones that are not consistent with key dates in the Contract Documents.
- F. Float available in the schedule may not be considered for the exclusive use of either the GSA or the Contractor.

#### 1.06 SUBMITTALS and MEETINGS

- A. Project Schedule Requirements Meeting:
  - 1. The Contractor shall meet with GSA within seven (7) calendar days after Notice-to-Proceed, to conduct a joint review of the Project Schedule requirements in this Section.
- B. Preliminary Schedule:
  - 1. Within fourteen (14) calendar days of Notice-to-Proceed, Contractor shall submit a Preliminary Schedule detailing the complete scope of work and proposed logical relationships. All owner furnished equipment and materials shall be identified with dates needed to be received by the Contractor.
  - 2. Within seven (7) calendar days of receipt by the GSA of the Preliminary Schedule, the Contractor and GSA shall meet to discuss the results of GSA's schedule review. To the extent that revisions are required, the Contractor shall resubmit the Preliminary Schedule to the GSA for approval within [seven (7) calendar] days of receipt of the GSA's comments.
- C. Baseline Project Schedule:
  - 1. Schedule activities shall be cost loaded in whole dollars and the assigned dollar value (cost-loading) of each activity of the Network shall cumulatively equal the specified Bid Item Breakdown and Total Contract Amount.
  - 2. For any items that the Contractor intends to bill for stored materials (when allowed by contract), these items need to be shown as separate "material procurement" activities in the schedule and the material dollars only placed on these activities. Billing for stored materials on any other schedule activities not broken out in this manner will not be allowed.
  - 3. Include an activity code field "SOV" for the coding of each schedule activity with the schedule of value (SOV) line items; this is for the tabulation and summarization of contractor assigned cost-loading Schedule of Values for application of Progress Payment Request reporting.
  - 4. The Contractor shall submit the Baseline Project Schedule within seven (7) calendar days after approval of the Preliminary Schedule. The Baseline Schedule shall be the Contractor's detailed plan for ALL work from NTP through contract completion. All punchlist work shall be completed to, or prior to, the Contract Completion Date.

5. Unless otherwise approved by the GSA, the Project Schedule shall include, but is not limited to, the following items:
  - a. Activities necessary to depict time to prepare submittals, time for the GSA to review submittals, procurement, design, construction, third party inspections, close-out, start-up, testing and balancing, commissioning and turnover, and work by separate contractors.
  - b. The schedule shall include separate activities for the submittal, review, procurement or fabrication, and delivery of key and long-lead items. The Project Schedule shall indicate submittal dates, and depict the review period as defined in the Contract or Supplementary Provisions for A/E/GSA review. Procurement/submittal activities shall be assigned codes that will allow these activities to be sorted and printed separately from the construction/close-out/commissioning work activities.
  - c. The Baseline Schedule shall have a Data Date no later than NTP, and no activities shall be progressed to show work completed to date without prior acceptance of the GSA.
  - d. Activity descriptions of the work shall include area designators sufficient to identify where the Work will occur, and shall match the Key Plans. The work related to each Activity shall be limited to one work trade and one area.
  - e. Interrelationships (logic) and sequencing for ALL activities. Each activity shall have at least one successor (except for the last activity) relationship to form a logically connected Network Plan from NTP to the Contract Completion Date. Each activity shall have at least one successor with a finish relationship (finish-to-start or finish-to-finish relationship).
  - f. Activity durations shall be in units of whole work days. Except submittal and procurement activities, durations shall not exceed one reporting period unless approved by the GSA. Durations for Government submittal reviews shall meet the requirements set forth in the Contract Documents. Activity durations shall not be overly short. One day durations shall not be assigned unless specifically requested by the contractor and specifically accepted by the GSA. Activity durations are expected to be between one week and one month, however shorter or longer durations can be assigned as needed to properly plan and coordinate the work.
  - g. Contractual milestone events as defined in the Contract Documents including, but not limited to, phased work, work restrictions/access/shift work, and work being performed by separate contractors shall be included in the schedule. The substantial completion and project completion tasks shall be assigned to a seven (7) day work week calendar.
  - h. ALL activities shall at a minimum be coded by Area, Responsibility (trade/ subcontractor), and Phase. Additional codes are allowed to sufficiently identify where work will occur. Codes shall be a maximum of six (6) characters and abbreviations shall be fully described in the Project Schedule narrative. The Contractor's self-performed work shall be clearly identifiable.
- D. Baseline Schedule Review Process and Submittal Requirements:
  1. The GSA will review the Baseline Schedule and provide comments to the Contractor within seven (7) calendar days of receipt of submittal and, if needed, will arrange for a Baseline Schedule Review Meeting with the Contractor for discussion of the schedule. The Baseline Schedule, when approved, shall become the basis for the next monthly Schedule Update submitted by the Contractor.
    - a. Baseline Schedule Review Meeting. The Contractor shall present the Baseline Schedule to GSA at the review meeting, and describe the Contractor's means and methods for accomplishing the Work [include if required earlier: and the cost loading of the schedule.]
    - b. In the event that GSA provides comments or the Baseline Schedule does NOT meet the requirements of this specification, the contractor shall, within [seven (7)] calendar days, revise the Project Schedule to bring it into compliance with these requirements, and Contractor shall make a full Baseline Schedule submission for GSA's review and approval.
    - c. Upon approval of the Baseline Schedule by the GSA, the cost-loaded values shown in the Project Schedule and progress of activities will be used as a basis for determining

progress payments. Monthly progress payments shall be based upon information developed using the current monthly Schedule Update. The computer generated cost report will be used by the GSA for verification of the Application for Payment submitted by the Contractor.

- d. GSA's approval of the Baseline Project Schedule does not relieve the Contractor of responsibility whatsoever for the accuracy or feasibility of the Project Schedule, or of the Contractor's ability to meet the Substantial Completion Date. Such acceptance does not create a warranty, expressed or implied, or acknowledge or admit the reasonableness of the activities, logic, durations, manpower, cost or equipment loading of the Contractor's Project Schedule.
  - e. If the Contractor fails to timely submit the Baseline Schedule, the GSA may withhold approval of progress payments until the Contractor submits the required Project Schedule.
2. The Baseline Schedule submission shall be comprised of the following, unless otherwise requested by the GSA:
- a. One (1) electronic copy of the entire Project Schedule shall be uploaded into ePM and provided in native electronic format and a PDF. The electronic copy shall be in a compressed format. The electronic filename shall have a unique identifier. Hard copy prints and reports shall be generated from the same version of the Project Schedule that is provided in electronic form.
  - b. One (1) electronic copy of the Network Plan (in time-scaled form), unless otherwise designated by the Contracting Officer. The following information shall be shown on the PDF: Activity ID, Activity Description, Calendar ID, Original Duration, Remaining Duration, Percent Complete, Area Code, Responsibility Code, Early Start, Early Finish, Total Float, Budgeted Cost, and Budgeted Quantity (i.e., labor, materials, equipment, etc.). The PDF shall include legends, dates and titles to sufficiently identify the Project Schedule A narrative providing additional clarification/explanation of items such that GSA is informed of the approach used to plan and sequence the work, coordinate with other separate contractors to the extent applicable, and resource and cost load the Project Schedule.

E. Schedule Updates

1. The Contractor shall submit a monthly Schedule Update that indicates the progress achieved since approval of the prior monthly Project Schedule update.
2. The Project Schedule shall be updated on a monthly basis throughout the entire Project performance period until Project completion is achieved.
3. The Contractor shall meet with GSA each month at a Schedule Update Meeting to review the Contractor's requested percent complete for actual progress achieved over the past period, including actual start dates, actual finish dates, and duration percent complete for activities that were started and/or completed during the reporting period.
4. The Schedule Update submission shall be comprised of the following:
  - a. One (1) electronic copy in native format, and a PDF of the entire Project Schedule, shall be uploaded into ePM. The electronic copy shall be in a compressed format. The electronic filename shall have a unique identifier and shall include a sequential number for each update. Hard copy prints and reports shall be generated from the same version of the Project Schedule that is provided in electronic form.
  - b. One (1) electronic copy time-scaled network PDF. The following information shall be shown on the PDF: Activity ID, Activity Description, Calendar ID, Original Duration, Remaining Duration, Percent Complete, Area Code, Responsibility Code, Early Start, Early Finish, Late Start, Late Finish, and Total Float. The PDF shall include legends, dates and titles to sufficiently identify the Project Schedule.
  - c. Monthly narrative shall address the following:
    - i. Discussion of the longest path in the previous schedule at the beginning of the period.

- ii. Discussion of progress achieved on the longest path.
  - iii. Explanation of any variance between the progress planned on the longest path and the actual progress achieved on the longest path.
  - iv. Same for near critical paths within two weeks of the longest path.
  - v. Description of other Work performed during the reporting period
  - vi. General description of the work on the forecasted longest path for the remainder of the project.
  - vii. Identification and discussion of work on the longest path planned to be performed during the next reporting period.
  - viii. Same for near critical paths within two weeks of the longest path.
  - ix. Description of other Work anticipated to be performed during the next reporting period.
  - x. Number of days ahead/behind the Substantial Completion Date
  - xi. Discussion of changes to the longest Path since the prior month's update.
  - xii. Description of problem areas and anticipated problem areas.
  - xiii. Current and anticipated delays including cause of delay, corrective actions taken, and impact of the delay on other activities, milestones, and completion dates
  - xiv. Pending items (Change Orders, requests for time-extensions, etc.), and status thereof.
  - xv. Identification and explanation of items or information required from the GSA or third parties to avoid schedule impacts.
5. GSA will review and provide comments on the Schedule Update within seven (7) calendar days of receipt of the Contractor's submission.
6. If the Contractor fails to timely submit the Schedule Update, the GSA may withhold approval of progress payments until the Contractor submits the required Project Schedule Update.
7. In the event of change modifications:
- a. As determined by CPM schedule analysis perform a time impact analysis during the project or as-built analysis after the project is substantially complete, only delays beyond the control of the Contractor, which affect the Substantial Completion Date, will be considered for a time extension.
  - b. When change modifications are proposed, potential delays are anticipated, or delays are experienced, the Contractor shall submit to GSA a written Time Impact Analysis describing the effect of each modification, potential delay, delay, or Contractor request on the Substantial Completion Date. This analysis shall be developed and submitted at the earliest time the Contractor becomes aware of a delay or potential delay, or as requested by the GSA. The preparation of Time Impact Analyses is considered part of the construction process and will be performed at no additional cost to the Government.
  - c. Failure of the Contractor to timely submit a Time Impact Analysis shall mean that it is mutually agreed that the particular modification, delay, or Contractor request does not require an extension of the contract time.
  - d. Approval or rejection of each Time Impact Analysis by the GSA shall be made within two (2) weeks after receipt of each Time Impact Analysis, unless subsequent meetings and negotiations are necessary. Upon approval, a copy of the Time Impact Analysis signed by the GSA shall be returned to the Contractor and incorporated into the Project Schedule, depicting a revised contractual substantial completion date, at the next Schedule Revision which will become the current approved Project Schedule.
  - e. The Contractor shall submit a Time Impact Analysis as follows:
    - i. Within five (5) work days after receipt of a written change modification.
    - ii. Within five (5) work days after receipt of a written notice by the GSA.
    - iii. Within five (5) work days from the beginning of a delay caused by unforeseeable circumstances.
  - f. The Time Impact Analysis shall meet the requirements for submittal of a Schedule



Revision including a Fragnet (see Section 1.05.F.3.c) with sufficient supporting documentation to enable the GSA to make a determination on the Contractor's request for time extension.

F. As-Built Schedule

1. Along with the final pay application the Contractor shall submit an As-Built Schedule documenting actual start and actual finish dates for all activities, and logic ties between all activities to show the actual sequence in which the work was performed.

1.07 RESPONSIBILITY FOR COMPLETION

- A. If, in the opinion of the GSA, the Contractor falls behind the planned progress as noted by negative float shown on the current monthly Schedule Update, the Contractor shall take any and all steps necessary to improve its progress at no additional cost to the Government. This shall not be construed as prohibiting the Contractor from increasing the number of working hours, shifts per day, working days per week, or the amount of construction equipment, or any combination of the foregoing, to eliminate the delay in the scheduled progress.
- B. Failure of the Contractor to comply with the requirements of the GSA under Paragraph 1.06.A shall be grounds for determination by the GSA that the Contractor is not prosecuting the work with such diligence as will ensure completion within the contract time. Upon such determination, the GSA may terminate the Contractor's right to proceed with the work, or any separable part thereof, in accordance with the applicable provisions of the contract.

1.08 PAYMENTS TO CONTRACTOR

- A. The GSA shall review the Contractor's monthly request for payment upon receipt and shall process the request for payment based upon the current approved Schedule Update. The GSA will consider the Contractor's overall progress toward Project Completion along with the progress for discrete activities to determine the amount to be approved for the monthly payment request.

1.09 PERFORMANCE MONITORING

- A. The GSA may elect throughout, or at any time during, the Project to record the number of workers and construction equipment working on each construction schedule activity in each area of the Project. The GSA's request for this information will be without additional cost to the Government and shall be provided within five (5) work days of receipt of the GSA's written request. This information will be used by the GSA to evaluate the adequacy of the Contractor's performance and project manpower staffing, as well as any Contractor claims.
- B. The Contractor is required to attend bi-weekly construction coordination meetings. As such, the Contractor shall present a copy of the current accepted schedule depicting the work planned for the next month. The bar chart should be sorted as requested by the GSA. Information to be shown on the bar chart includes: Activity ID, Activity Description, Original Duration, Remaining Duration, Percent Complete, Area Code, Responsibility Code, Early Start/Actual Start, Early Finish, and Total Float.

1.10 CPM SCHEDULING SOFTWARE

- A. A copy of the scheduling software used by the Contractor shall be provided to the GSA at no additional cost for the GSA's use in reviewing and working with the schedule. The Contractor shall

provide technical software support services from the manufacturer on an as-needed basis by the GSA.

- B. The Project Schedule shall be produced using widely used, industry standard, commercially available computer software that is capable of generating and monitoring a CPM schedule. Examples of widely used commercially available software include but not limited to Microsoft Project® and Primavera P6.®

**END OF SECTION 01 31 20**

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## SECTION 01 32 00 - CONSTRUCTION PROGRESS DOCUMENTATION

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including Federal Acquisition Regulations (FAR) and General Services Administration Acquisition Regulations (GSAR) contract clauses, General and Supplementary Conditions, and Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. This section includes certain schedules and reports required for documenting the progress of construction during performance of the Work.
- B. Coordinate the timing for preparation and processing of schedules and reports with the performance of other construction activities, and maintain a consistent and logical correlation between updated schedules and reports.
- C. All construction progress documentation should be created and transmitted electronically into GSA's electronic Project Management (ePM) database system.
- D. Related Sections include the following:
  - 1. Division 01 Section "Summary" for phases of the Work.
  - 2. Division 01 Section "Payment Procedures" for submitting the Schedule of Values.
  - 3. Division 01 Section "Project Management and Coordination" for submitting and distributing meeting minutes, conference minutes and construction progress documents electronically.
  - 4. Division 01 Section "Submittal Procedures" for submitting schedules and reports.
  - 5. Division 01 Section "Quality Assurance and Control Requirements" for submitting a schedule of tests and inspections.
  - 6. Division 01 Section "Sustainable Design Requirements" for submitting Material Reporting Forms.

#### 1.3 SCHEDULE OF INSPECTIONS AND TESTS

- A. Prepare and submit a schedule of inspections, tests and similar services required by the Contract Documents within **30** calendar days after issuance of the Notice to Proceed.
- B. Contractor shall coordinate the schedule of inspections and tests with the Construction Schedule and other related documents. Prepare the schedule in tabular form, including but not limited to the following information:
  - 1. Specification section number.
  - 2. Description.
  - 3. Identification of applicable standards.
  - 4. Identification of methods to be used.
  - 5. Number of inspections, tests or similar services.
  - 6. Time schedule or time span.
  - 7. Responsible entity.

8. Requirements for taking samples.
9. Unique characteristics.

- C. Distribution: Submit in ePM electronic copies of the schedule of inspection and tests to the Contracting Officer, entities designated by the Contracting Officer, and each party involved in performance of portions of the Work where inspections, tests and similar serviced are required.

#### 1.4 SCHEDULE OF SUBMITTALS

- A. Prepare and submit a schedule of submittal required by the Contract Documents within fourteen (14) calendar days after issuance of the Notice-to-Proceed.
- B. Contractor shall create in ePM the schedule of submittals and other related documents. Prepare the schedule in tabular form, including but not limited to the following information:
1. Specification number
  2. Specification Title
  3. Submittal description
  4. Type of submittal
  5. Date submitted
  6. Date due back
  7. Date returned
  8. Action taken

#### 1.5 REPORTS

- A. Daily Construction Reports: Prepare electronic daily construction report recording the following information concerning but not limited to events at the site. All daily reports are to be uploaded to GSA's e-PM Include:
1. List of subcontractors at the site.
  2. List of separate contractors at the site.
  3. Count of personnel at the site, by trade.
  4. High and low temperatures, general weather conditions.
  5. Accidents.
  6. Meetings and significant decisions.
  7. Unusual events (see D. Unusual Event Reports below).
  8. Stoppages, delays, shortages, and losses.
  9. Meter readings and similar recordings.
  10. Emergency procedures.
  11. Orders and requests of governing authorities.
  12. Change Orders received or implemented.
  13. Services connected or disconnected.
  14. Equipment or system tests and startups.
  15. Partial completions or occupancies.
  16. Summary of all work performed.
- B. Material Location Reports: At not more than weekly intervals, prepare a comprehensive list of materials delivered to and stored at the site. The list shall be cumulative, showing materials previously reported plus items recently delivered. Include a statement of progress on and delivery dates for materials or items or equipment fabricated or stored away from the site. Within fourteen

(14) calendar days, submit copies of the list to the Contracting Officer (CO) or Contracting Officer's Representative (COR).

- C. Field Correction Reports: When the need to take corrective action requires a departure from the Contract Documents, prepare a detailed report. Include a statement describing the problem and recommended changes. Indicate reasons the Contract Documents cannot be followed. Within three (3) calendar days, submit a copy to the Contracting Officer or Contracting Officer's representative for approval.
- D. Unusual Event Reports: When an event of an unusual and significant nature occurs at the site, prepare a detailed report. List the chain of events, persons participating, response by the Contractor's personnel, evaluation of the results or effects, and similar pertinent information. Within seven (7) calendar days, submit a copy to the Contracting Officer or Contracting Officer's representative immediately. Advise the Contracting Officer or Contracting Officer's representative in advance when such events are known or predictable.
- E. Security Clearance Tracking Reports: Provide Security Clearance Tracking Reports at every bi-weekly meeting. Coordinate further with Division 01 Section "Security Regulations."

PART 2 - PRODUCTS (Not applicable)

PART 3 - EXECUTION (Not applicable)

**END OF SECTION 01 32 00**

## SECTION 01 33 00 - SUBMITTAL PROCEDURES

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including Federal Acquisition Regulations (FAR) and General Services Administration Acquisition Regulations (GSAR) contract clauses, General and Supplementary Conditions, and Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. This Section includes certain administrative and procedural requirements for shop drawings, coordination drawings, schedules, samples and certain other quality assurance submittals.
- B. This section does not include requirements for the following submittals that are included in their specific sections:
  - 1. Division 01 Section "Payment Procedures" for submitting Applications for Payment and the Schedule of Values.
  - 2. Division 01 Section "Project Management and Coordination" for submittals by electronic means, for submitting and distributing meeting and conference minutes, and for submitting Coordination Drawings.
  - 3. Division 01 Section "Construction Progress Documentation" for submitting schedules and reports, including Contractor's Construction Schedule and the Submittals Schedule.
  - 4. Division 01 Section "Requests for Interpretation" for submitting requests for clarification of the Contract Documents during construction.
  - 5. Division 01 Section "Quality Assurance and Control Requirements" for submitting test and inspection reports, and for mockup requirements.
  - 6. Division 01 Section "Product Requirements" for specified warranties.
  - 7. Division 01 Section "Closeout Procedures" for submitting warranties and closeout submittals.
  - 8. Division 01 Section "Project Record Documents" for submitting Record Drawings, Record Specifications, and Record Product Data.
  - 9. Division 01 Section "Operation and Maintenance Data" for submitting operation and maintenance manuals.
  - 10. Division 01 Section "Indoor Air Quality (IAQ) Management" for submitting the IAQ Management Plan and submittal documentation.
  - 11. Division 01 Section "Construction Waste Management and Disposal" for submitting the Construction Waste Management Plan and submittal documentation.
  - 12. Division 01 Section "Sustainable Design Requirements" for additional LEED submittal requirements.
  - 13. Divisions 02 through 49 Sections for specific requirements for submittals in those Sections.
- C. Shop drawings, coordination drawings and schedules are further categorized and defined as follows:

1. Shop drawings include drawings and schedules prepared for specific parts of the project, except for coordination drawings.
  2. Coordination drawings are specified in Division 01 Section "Project Management and Coordination."
  3. Product data includes manufacturer's standard catalogs, pamphlets and other printed materials that show and describe materials and items, and includes but is not limited to the following:
    - a. Product specifications.
    - b. Installation instructions.
    - c. Color charts.
    - d. Catalog cuts.
    - e. Rough-in diagrams and templates.
    - f. Wiring diagrams.
    - g. Performance curves.
    - h. Operational range diagrams.
    - i. Mill reports.
- D. Samples of actual materials and items shall be provided at such scale to allow delivery for review, as well as for field samples or mock-ups of full-size physical examples erected on-site or elsewhere, to establish a true-scale standard by which the corresponding work will be judged or a standard for compliance testing.
- E. Other quality assurance submittals include materials specifically prepared for the project, except drawings and schedules, and include but are not limited to the following:
1. Design data and calculations.
  2. Certifications of compliance or conformance.
  3. Manufacturer's instructions and field reports.
- F. Approvals do not supersede requirements of the contract documents.

### 1.3 GENERAL SUBMITTAL REQUIREMENTS

- A. Coordination: Coordinate preparation and processing of submittals with performance of construction activities and with the Submittal Schedule specified in Division 01 Section "Construction Progress Documentation". Unless otherwise specified, submittals shall be transmitted via GSA's electronic Project Management (ePM) system as PDF electronic files to GSA according to the contractor's approved construction schedule and submittal schedule. Transmit each submittal sufficiently in advance of the scheduled performance of related construction activities to avoid delaying the Work, allowing for the review times specified for submittals.
1. Coordinate each submittal with other submittals and related activities that require sequential scheduling, to allow for testing, purchase, fabrication and product delivery in a timely manner.
  2. Schedule transmittal of different categories of submittals for the same element of Work and for different elements of related parts of the Work at the same time. Notwithstanding the foregoing sentence, the Contractor shall provide a complete submittal package for each Division of the specification so as to enable the Government to review the related sections together. Coordinate submittals to enable approvals and acceptances so as not to inhibit orderly progress of the Work.

3. Post electronic submittals as PDF electronic files directly to the ePM system specifically established for the Project. GSA will return annotated file. Annotate and retain one copy of file as an electronic project record document file.
  4. Allow sufficient time for submittal review, corrections following the initial review, and re-submittal review before activities scheduled after the submittal approval.
  5. Failure on the part of the Contractor to indicate approval or acceptance on submittals prior to submission to the Architect will result in their being returned to the Contractor without being acted upon.
  6. Any resubmission required after Government review shall be made within 10 calendar days after return of the submittal, unless specifically authorized otherwise by GSA.
  7. Submittals which are determined to be incomplete or otherwise substandard will be returned to the Contractor with no further review. Delays due to incomplete or rejected submittals will not be excused.
  8. Construction will not be allowed to proceed if submittals are not received in a timely manner, and will not result in an extension to the Contractor's Construction Schedule.
  9. Failure by the Contractor to provide the required submittals in a timely manner may result in withheld payments until submittals are up-to-date.
  10. Maintain one complete set of submittals at project site.
  11. Maintain an organized submittal register at project site. This will be an agenda item for progress meetings.
  12. The Contractor to schedule and allow a minimum of fifteen working days for the Architect/Engineer submittal review. The comment period initiates upon the receipt of the submittal by the office performing the primary review. The period commences upon issue of the submittal by the office performing the primary review. In the event the Architect/Engineer receives an extraordinary lengthy or complex submittal whose review may not be able to be accomplished within the stipulated submittal review period, Architect/Engineer to notify the Construction Manager Agency (CMA) in writing with a request for extended review period within 3 working days of receipt of the submittal. Such submittals may include structural steel, curtain wall, or complex systems requiring coordination with other systems.
- B. Submittal Identification and Information: Identify and incorporate information in each electronic submittal file as follows:
1. Assemble each submittal item into a single indexed file incorporating submittal requirements of a single Specification Section and transmittal form with links enabling navigation to each submittal item.
  2. Name file with submittal number or other unique identifier, including revision identifier.
    - a. File name shall use Contract number and Specification Section number followed by a decimal point and then a sequential number (e.g., LNHS-061000.01). Re-submittals shall include an alphabetic suffix after another decimal point (e.g., LNHS-061000.01.A).
  3. Provide means for insertion to permanently record Contractor's review and approval markings and action taken by GSA.
  4. Transmittal Form for Electronic Submittals: Use software-generated form from electronic project management software acceptable to GSA.
    - a. Project name.
    - b. GSA project number.
    - c. Date.
    - d. Name and address of Architect.
    - e. Name of Contractor.
    - f. GSA contract number.
    - g. Name of firm or entity that prepared submittal.
    - h. Names of subcontractor, manufacturer, and supplier.
    - i. Category and type of submittal.



- j. Submittal purpose and description.
  - k. Specification Section number and title.
  - l. Specification paragraph number or drawing designation and generic name for each of multiple items.
  - m. Drawing number and detail references, as appropriate.
  - n. Location(s) where product is to be installed, as appropriate.
  - o. Related physical samples submitted directly.
  - p. Indication of full or partial submittal.
  - q. Transmittal number, numbered consecutively.
  - r. Submittal and transmittal distribution record.
  - s. Other necessary identification.
  - t. Include the following information as keywords in the electronic file metadata:
    - u. Project name.
    - v. GSA project number.
    - w. Contract number.
    - x. Number and title of appropriate Specification Section.
    - y. Specification paragraph number and generic name of each item.
    - z. Manufacturer name.
    - aa. Product name and model number.
- C. Submit submittals as per LEED for all products and materials identified in Specification Sections 3-10, 12, 31.60 Foundations, 32.10 Paving, 32.30 Site Improvements, and 32.9 Planting. MEP and elevators are excluded. Comply with requirements specified in Division 01 Section "Sustainable Design Requirements."

#### 1.4 SHOP DRAWINGS AND COORDINATION DRAWINGS

- A. Submit originally prepared information, drawn accurately to scale. Do not reproduce Contract Documents or copy standard printed materials as the basis for Shop Drawings and Coordination Drawings.
- B. Include at minimum the following information on Shop Drawings and Coordination Drawings:
- 1. Dimensions.
  - 2. Identification of products and materials.
  - 3. Compliance with specified standards.
  - 4. Notation of coordination requirements.
  - 5. Notation of dimensions established by field measurements.
  - 6. Highlighted or encircled deviations from the Contract Documents.
- C. Sheet size: Except for templates, patterns and similar full-size drawings, submit Shop Drawings and Coordination Drawings on sheets of at least 8-1/2 by 11 inches but no larger than 30 by 40 inches..
- D. Submittals: Unless otherwise indicated, submit one electronic file (.pdf) of each drawing submittal through ePM. The file will be marked with action taken and returned.
- E. Distribution: When submittal is approved or accepted, Contractor shall prepare final electronic files, for the following purposes.
- 1. One file shall be marked and retained as a "Record Document."
  - 2. Unless otherwise requested, one file shall be provided to the Contracting Officer.
  - 3. Additional prints shall be provided to the entities involved in the construction.

4. Prints will be included in the Operation and Maintenance manuals.

## 1.5 PRODUCT DATA

- A. Collect Product Data into a single submittal for each system or element of construction. Mark each copy to show specific product choices and options applicable to the project. Product Data shall include the following information, where applicable:
  1. Manufacturer's printed recommendations.
  2. Compliance with recognized trade association standards.
  3. Compliance with recognized testing standards.
  4. Applicability of testing agency labels and seals.
  5. Notation of dimensions verified for fit by field measurements.
  6. Notation of coordination requirements.
- B. Preliminary Submittal: Prior to submittal of complete Product Data, submit a preliminary single copy of that part of Product Data when selection of options is required, such as for color charts. Preliminary submittal will be returned, with selection noted, for the Contractor's use in subsequent submittals.
- C. Submittals: Unless otherwise indicated, submit one electronic copy of each Product Data submittal. One original copy will be retained and a copy will be marked with action taken and returned to the Contractor.
- D. Distribution: When submittal is approved or accepted, Contractor shall distribute copies for the following purposes:
  1. One copy shall be marked and retained as a "Record Document."
  2. Additional copies shall be provided to the manufacturers, subcontractors, suppliers, installers, governing authorities and others as required for performance of the applicable construction activities.
  3. Copies required for operation and maintenance manuals

## 1.6 SAMPLES

- A. Submit full-size, fully fabricated samples, cured and finished in the manner specified. Samples shall be physically identical to the material or product proposed for use.
- B. Mount, display, or package samples to facilitate review of kind, color, pattern, texture and other qualities indicated, as a final check of these characteristics with other elements and for comparison of these characteristics with those of the actual component delivered and installed.
- C. Where variation in color, pattern, texture or other characteristic is inherent in the material or product, submit at least 3 multiple units that show approximate limits of the variations.
- D. Refer to other specification sections for requirements for samples that illustrate workmanship, fabrication techniques, and details of assembly, connections, operations and similar construction characteristics.
- E. Refer to other specification sections for samples to be returned to the Contractor for incorporation in the Work. Such samples must be in undamaged condition at time of use.

- F. Preliminary Submittal: Where color, pattern, texture or similar characteristics are specified to be selected from a manufacturer's range of standard choices, submit a preliminary single set sample of available choices prior to submittal of the complete sample. Preliminary submittal will be returned, with selection noted, for the Contractor's use in subsequent submittals.
- G. Submittals: Unless otherwise indicated and except for field samples or mock-ups of full-size physical examples erected on-site or elsewhere, submit not less than three (3) sets of each sample submittal. One copy will be marked with action taken and returned. Comply with requirements in the individual specification section for field samples and mockups.
- H. Distribution: Except for field samples or mockups, when submittal is approved, Contractor shall distribute approved copies for the following purposes:
  - 1. One copy shall be marked and retained as a "Record Document" at the Project Site, and shall be available for comparison throughout the course of construction activity.
  - 2. Additional copies shall be provided to manufacturers, subcontractors, suppliers, installers, governing authorities and others as required for performance of the applicable construction activities.

#### 1.7 OTHER QUALITY CONTROL SUBMITTALS

- A. Submit other quality control submittals in compliance with requirements in the individual specification sections, including Division 01.
- B. Certifications: Submit notarized certifications indicating compliance with specified requirements. Certifications shall be signed by an individual authorized to sign on behalf of the Contractor.
- C. Contractor's Construction Schedule: Comply with requirements specified in Division 01 Section "Construction Progress Documentation."
- D. Installer Certificates: Prepare written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.
- E. Manufacturer Certificates: Prepare written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.
- F. Product Certificates: Prepare written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.
- G. Product Test Reports: Prepare written reports indicating current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.
- H. Field Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.

- I. Maintenance Data: Prepare written and graphic instructions and procedures for operation and normal maintenance of products and equipment. Comply with requirements specified in Division 01 Section "Operation and Maintenance Data."
- J. Manufacturer's Instructions: Prepare written or published information that documents manufacturer's recommendations, guidelines, and procedures for installing or operating a product or equipment. Include name of product and name, address, and telephone number of manufacturer. Include the following, as applicable:
  - 1. Preparation of substrates.
  - 2. Required substrate tolerances.
  - 3. Sequence of installation or erection.
  - 4. Required installation tolerances.
  - 5. Required adjustments.
  - 6. Recommendations for cleaning and protection.
- K. Insurance Certificates and Bonds: Prepare written information indicating current status of insurance or bonding coverage. Include name of entity covered by insurance or bond, limits of coverage, amounts of deductibles, if any, and term of the coverage.
- L. Material Safety Data Sheets (MSDSs): Submit information directly to Contracting Officer; do not submit to Architect.
  - 1. Architect will not review submittals that include MSDSs, and will return the entire submittal for resubmittal.
  - 2. Submit to LEED Consultant to verify Volatile Organic Compound (VOC) content limit for adhesives, sealants, paints, coatings, and flooring products and finishes used within the weatherproofing barrier and applied on-site. Comply with requirements specified in Division 01 Section "Limits for Volatile Organic Compound Contents for Adhesives, Sealants, Paints and Coatings."

## 1.8 REVIEW ACTION ON SUBMITTALS

- A. For electronic submittals:
  - 1. Submit electronic submittals via ePM as PDF electronic files.
    - a. GSA will return annotated file. Annotate and retain one copy of file as an electronic Project record document file.
- B. Compliance with specified characteristics is the Contractor's responsibility, and is not part of the Contracting Officer's review and indication of action taken.  
The contract documents shall prevail in case of review action conflict.
- C. Submittals without approval or acceptance shall not be used.
- D. Action Stamp:
  - 1. (For paper or non-electronic submittals only): Each submittal will be stamped with a uniform action stamp. The stamp shall be marked to indicate one of the following actions taken.
  - 2. (For electronic submittals): Provide a digital signature with digital certificate on electronically submitted certificates and certifications where indicated. For notarized signature if required, provide paper copies for signature.
    - a. Final Unrestricted Release: Where marked "No Exceptions Taken", the work covered by the submittal may proceed, provided it complies with the requirements of the Contract Documents.

- b. Final But Restricted Release: Where marked "Make Corrections Noted", the work covered by the submittal may proceed, provided it complies with the notations or corrections on the submittal and with the requirements of the Contract Documents.
  - c. Return for Re-submittal: Where marked "Revise and Resubmit" or "Rejected", do not proceed with the work covered by the submittal, including purchasing, fabrication, delivery or any other activity. Revise or prepare a new submittal according to the notations on the submittal or on the return transmittal. Resubmit without delay, repeating as necessary to obtain a final release action mark.
  - d. No Action: Where a submittal is for the record or for information or for another purpose not requiring review action, the submittal may not be returned or may be returned and marked "No Action Taken."
- E. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
- 1. If information must be specially prepared for submittal because standard published data are not suitable for use, submit as Shop Drawings, not as Product Data.
  - 2. Mark each copy of each submittal to show which products and options are applicable.
  - 3. Include the following information as applicable:
    - a. Manufacturer's catalog cuts.
    - b. Manufacturer's product specifications.
    - c. Standard color charts.
    - d. Statement of compliance with specified referenced standards.
    - e. Testing by recognized testing agency.
    - f. Application of testing agency labels and seals.
    - g. Notation of coordination requirements.
    - h. Availability and delivery time information.
  - 4. For equipment, include the following in addition to the above, as applicable:
    - a. Wiring diagrams showing factory-installed wiring.
    - b. Printed performance curves.
    - c. Operational range diagrams.
    - d. Clearances required to other construction, if not indicated on accompanying Shop Drawings.
  - 5. Submit Product Data before or concurrent with Samples.
  - 6. Submit Product Data in the following format:
    - a. PDF electronic file.

## 1.9 SUBSTITUTION REQUEST PROCEDURES

- A. Substitution Requests: See Division 01 Section "Substitution Procedures."

PART 2 - EXECUTION (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

**END OF SECTION 01 33 00**

## SECTION 01 40 00 - QUALITY ASSURANCE & CONTROL REQUIREMENTS

### GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including Federal Acquisition Regulations (FAR) and General Services Administration Acquisition Regulations (GSAR) contract clauses, General and Supplementary Conditions, and Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. This section includes administrative and procedural requirements for quality assurance and quality control services.
  - 1. See Division 01 Section "Cutting and Patching" for repair of work in place.
- B. Quality Assurance & Control: The Contractor is solely responsible for developing, implementing, and providing for all quality control and related processes in the Contractor's Quality Control Plan to ensure that all parts of the project meet or exceed all of the requirements as set forth in the Contract Documents.
  - 1. The testing and inspections indicated in the Specifications (Testing) is a spot checking program identified by the AE per design or building code requirements, performed by an Independent Testing Agency (Agency), and is not intended as a portion of the Contractor's Quality Control Plan.
  - 2. The presence of the Agency shall in no way relieve the Contractor of his obligation to perform the work in accordance with the Contract Documents.
  - 3. The Testing indicated in the Specifications cannot be used to refute conditions of suspected poor quality noticed in the field.
  - 4. In order to provide for a measure of the Contractor's quality control, the Government, either with its own employees or contractors, may continuously monitor the Contractor's quality control and related processes. This monitoring is not a part of the Contractor's Quality Control Plan.
  - 5. To the extent that the Contractor fails or otherwise refuses or neglects to develop, implement, or provide for all quality control and related processes, the Government may, in addition to any other available remedies under the Contract, elect to perform quality assurance beyond that indicated in the Specifications and charge the Contractor for any and all costs related thereto.
- D. Quality assurance and quality control include tests, inspections and related actions, including reports, performed by the Contractor, manufacturers, independent agencies or governing authorities.
  - 3. These testing and inspection services are required for, products, customized fabrication and installation procedures as well as for items to be professionally designed by the Contractor (delegated design).
  - 4. Product testing shall be done by a Nationally Recognized Testing Laboratory (NRTL) and National Voluntary Laboratory Accreditation Program (NVLAP), or other GSA approved testing facility.

- E. The independent quality assurance testing and inspection (Testing) requirements for individual construction materials and activities are included in the Specification sections that specify those construction materials and activities.
- F. Mock-ups: Full-size physical assemblies that are constructed on-site unless otherwise directed by GSA. Mock-ups are constructed to verify selections made under Sample submittals; to demonstrate aesthetic effects as well as qualities of materials and execution; to review coordination, testing, or operation; to show interface between dissimilar materials; and to demonstrate compliance with specified installation tolerances. Mock-ups may be done on the interior or exterior. Mock-ups are not Samples. Approved mock-ups establish the standard by which the Work will be judged.
- G. Definitions:
  - 3. Source Quality Control Testing is done at the product source.
  - 4. Field Quality Control Testing is done on site.

### 1.3 TESTING AND INSPECTION REPORTS

- D. The Contractor the Contractor's testing agency(ies) and the Agency, where they perform the services, shall submit a certified written report in ePM of each test, inspection or other quality control service using the workflow process of ePM. Maintain a log both of accepted and rejected reports including corrective actions taken and date of retesting and compliance. Paper Copies: In addition to uploading report copies to ePM, the Agency shall also send certified copies of test and inspection reports as specified to the following parties:
  - 3. Two (2) copies to the Government.
  - 4. Two (2) copies to the CM or Contractor.
  - 5. Two (2) copies to the A/E
- E. Testing and inspection reports shall include but not be limited to the following:
  - 3. Date of issue.
  - 4. Project title and number.
  - 5. Name, address, and telephone number of testing agency.
  - 6. Dates and locations of samples and tests or inspections.
  - 7. Names of individuals making the test or inspection.
  - 8. Designation of the work and test method.
  - 9. Identifications of product and specification section.
  - 10. Complete test or inspection data.
  - 11. Test results and an interpretation of test results.
  - 12. Ambient conditions at the time of sample taking and testing.
  - 13. Certify whether tested or inspected Work complies with Contract Document requirements.
  - 14. Name and signature of laboratory inspector.
  - 15. Recommendations on retesting.
- F. All quality operations shall within 24 hours notify, by personal contact and written notice, GSA's representative and the Contractor of irregularities or deficiencies observed in the Work during performance of their services.
- G. All quality operations shall maintain a log of all their tests and inspections and a separate log of those that do not conform to the requirements of the Contract Documents. Both logs shall be published and reviewed weekly with the Contractor and the Government and/or at the weekly meeting.

#### 1.4 RESPONSIBILITIES

- A. Contractor Responsibilities: Unless specifically indicated otherwise, the Contractor shall provide the quality control services including those required by local jurisdictions.
  - 1. Obtain copies of applicable codes, standards, procedures, regulations, etc. relative to materials, procedures, testing and inspection on the Project and make those available at the Project site for reference.
- B. Contractor shall submit each testing agency's firm name, and credentials to perform the specified services, to the Government for GSA's approval at least fifteen (15) calendar days before scheduled inspections or tests.
- C. Retesting: The Contractor is responsible for retesting, including repeated inspections and other services, where results of the initial quality control services indicate noncompliance. The Contractor shall be responsible for the Agency or an equally qualified agency for these services. If the Agency does not provide the retesting or inspection, the Contractor shall be responsible for having the Agency observe the testing and inspection work.
  - 1. Tests for Suspected Deficient Work: If in the opinion of the Government, any of the work of the Contractor that does not appear to conform to requirements, the Contractor shall make the tests that the Government deems advisable to determine its conformance to the Contract Documents.
  - 2. The government shall pay the costs if the tests prove the suspected work to be satisfactory.
- D. Associated Services: The Contractor shall cooperate with others, including the Agency, performing tests, inspections and other quality services, and shall provide reasonable auxiliary services as requested. Contractor shall notify the testing and inspection entities sufficiently in advance of operations to permit their timely assignment of personnel. Auxiliary services include but are not limited to the following:
  - 1. Provide access to the work and all documents (Contract documents, shop drawings, product data, Contractor and Sub-Contractor testing and inspections, etc.).
  - 2. Furnish incidental labor and facilities necessary to facilitate inspections and tests.
  - 3. Provide adequate quantities of representative samples of materials that require testing or assist the agency in taking samples.
  - 4. Provide facilities for storage and curing of test samples and equipment.
  - 5. Deliver samples to testing laboratories.
  - 6. Provide security and protection of samples and test equipment at the Project site.
- E. Duties of the Independent Testing Agency (Agency): The Agency engaged to perform tests, inspections and other quality services shall cooperate with GSA's representative and the Contractor in performance of the Agency's duties.
  - 1. The Agency shall provide qualified personnel to perform required inspections and tests.
  - 2. The Agency shall provide certifications and a list of personnel assigned to each portion of the work.
  - 3. The Agency is not authorized to release, revoke, alter or enlarge requirements of the Contract Documents or approve or accept any portion of the Work.
  - 4. The agency shall not perform any duties of the Contractor.
  - 5. The Testing Agency's proposal shall contain the outlined Testing based on a unit price basis for tests and inspections and on an hourly basis for personnel.
  - 6. The Agency shall certify the test results and observations.
  - 7. The Agency shall interpret whether or not their results and observations meet specified Project requirements.
  - 8. The Agency shall submit reports per Section: Testing and Inspection Reports, above.



9. The Agency shall maintain logs per Section: Testing and Inspection Reports, above.
  10. The Agency shall review the applicable certificates of the Contractor's personnel to verify the validity and current status of the certificate.
  11. For construction personnel without necessary certificates, the Agency shall oversee the certification process of construction personnel to ensure their qualifications to perform the specified duties. The Contractor shall be responsible to the Agency for these services.
  12. The Agency shall obtain and review the project plans and specifications with the Government as soon as possible prior to the start of construction.
  13. The Agency shall attend pre-construction conferences to coordinate materials inspection and testing requirements with the planned construction schedule. The Agency shall participate in such conferences where the Testing is indicated throughout the course of the project.
- F. Independent Testing Agency Payment: The Contractor shall obtain and include the Agency's cost in the Contract Sum.
1. The Contractor shall submit payments for the Agency, track the Agency's budget and keep the GSA informed on projected Agency costs and remaining budget.
  2. Only the GSA can modify the Agency's scope.
- G. Coordination: The Contractor shall coordinate the sequence of activities to accommodate required services with a minimum of delay.
1. Activities shall be coordinated to avoid the necessity of removing and replacing construction to accommodate inspections and tests.
  2. The Contractor shall be responsible for scheduling times for inspections, tests, taking samples and similar activities.

#### 1.5 QUALIFICATIONS OF THE INDEPENDENT TESTING AGENCY (AGENCY) AND CONTRACTOR TESTING AGENCIES

- A. A qualified independent testing agency shall be an accredited entity engaged to perform tests and inspections, both at the Project site or elsewhere and to report on and to interpret results of those tests or inspections. Testing agencies shall be acceptable to GSA and the Agency shall be authorized by authorities having jurisdiction to operate in jurisdiction where project is located.
- B. Unless other accreditation is specifically specified in the applicable individual section, each testing agency shall be prequalified as complying with the American Council of Independent Laboratories "Recommended Requirements for Independent Laboratory Qualifications", or shall be recognized by the Occupational Safety and Health Administration (OSHA) in accordance with 29 CFR Part 1910.7 to test and approve equipment or materials for their safe intended use. Each testing agency shall specialize in the types of tests and inspections to be performed.
- C. Testing agencies shall be authorized by authorities having jurisdiction to operate in the jurisdiction where the project is located. Testing agency qualifications: NRTL (Nationally Recognized Testing Laboratory) per 29 CFR 1910.7, and NVLAP (National Voluntary Laboratory Accreditation Program) per NIST, and documented per ASTM 329 and is acceptable to GSA.

#### 1.6 CONTRACTOR QUALITY CONTROL PLAN

- A. Contractor's Quality-Control Plan: Submit within 5 days from NTP for quality-control activities and responsibilities. Submit in electronic format and upload to ePM. Identify personnel, procedures,

controls, instructions, tests, records, and forms to be used to carry out Contractor's quality-control responsibilities. Coordinate with the construction schedule. The procedures, controls, inspections, and tests shall be indicated by specification section and shall include the specific actions that the Contractor's QC team will take to verify compliance of the work with the specifications and drawings.

- B. **Quality-Control Personnel Qualifications:** Engage qualified full-time personnel trained and experienced in managing and executing quality-assurance and quality-control procedures similar in nature and extent to those indicated in the Specifications.
1. Provide a project quality-control manager, who may also serve as Project Superintendent.
  2. **Submittal Procedure:** Describe procedures for ensuring compliance with requirements through review and management of submittal process. Indicate qualifications of personnel responsible for submittal review.
  3. Describe process for continuous inspection during construction to identify and correct deficiencies in workmanship. Indicate types of corrective actions to be required to bring work into compliance with standards established by the Contract requirements and approved mock-ups.
- C. Provide reports per Section 1.3 Testing and Inspection Reports, above.
- D. **Other Reports**
1. **Manufacturer's Technical Representative's Field Reports:** Prepare written information documenting manufacturer's technical representative's tests and inspections specified in other Sections. Include the following:
    - a. Name, address, and telephone number of technical representative making report.
    - b. Statement on condition of substrates and their acceptability for installation of product.
    - c. Statement that products at Project site comply with requirements.
    - d. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.
    - e. Results of operational and other tests and a statement of whether observed performance complies with requirements.
    - f. Statement if conditions, products, and installation will affect warranty.
    - g. Other required items indicated in individual Specification Sections.
  2. **Factory-Authorized Service Representative's Reports:** Prepare written information documenting manufacturer's factory-authorized service representative's tests and inspections specified in other Sections. Include the following:
    - a. Name, address, and telephone number of factory-authorized service representative making report.
    - b. Statement that equipment complies with requirements.
    - c. Results of operational and other tests and a statement of whether observed performance complies with requirements.
    - d. Statement if conditions, products, and installation will affect warranty.
    - e. Other required items indicated in individual Specification Sections.
  3. **Permits, Licenses and Certificates:** For the Government's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

PART 2 - PRODUCTS (Not applicable)

PART 3 - EXECUTION

3.1 REPAIR AND PROTECTION

- A. Upon completion of testing, inspection, sample taking and other quality control services, repair damaged construction and restore substrates and finishes to like new conditions. Comply with the requirements of the Contract Document, including Division 1 Section "Cutting and Patching."
- B. Protect construction exposed by or for quality control service activities, and protect repaired construction. Cleaning, repair and protection of testing areas is the Contractor's responsibility, regardless of the assignment of responsibility for testing, inspection or other quality control or assurance services.

**END OF SECTION 01 40 00**

## SECTION 01 42 00 - REFERENCES

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including Federal Acquisition Regulations (FAR) and General Services Administration Acquisition Regulations (GSAR) contract clauses, General and Supplementary Conditions, and Division 01 Specification Sections, apply to this Section.

#### 1.2 DEFINITIONS

- A. Agreement: The Agreement forms part of the Contract between the parties.
- B. "Building Manager" is the Government employee responsible for the administration, operation and maintenance of the building.
- C. Contract: see Agreement.
- D. "Cutting" refers to removal of material by cutting, sawing, drilling, breaking, chipping, grinding, excavating and similar operations.
- E. "Furnish" means to supply and deliver to the Project site, ready for unloading, unpacking, assembling, installation and similar operations.
- F. "General Terms and Conditions" are defined by the Agreement.
- G. "Government" refers to the General Service Administration, Public Buildings Service (GSA PBS).
- H. "Indicated" refers to graphic representations, notes or schedules on the Drawings, or to requirements elsewhere in the Specifications or other Contract Documents. Terms such as "shown", "noted", "scheduled" and "specified" have the same meaning as "indicated" and are used to further help locate the reference, but no limitation on location is intended.
- I. "Install" describes operations at the Project site, including unloading, temporary storage, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning and similar operations.
- J. "Installer", unless otherwise noted or under separate contract with the Government, is the Contractor or another entity engaged by the Contractor, either directly or indirectly through subcontracting, to perform a particular construction operation at the Project site, including installation, erection, application and similar operations. Installers shall be skilled in the operations they perform. Where indicated, installers shall also be Specialists as defined in the Construction Contract Clauses.
- K. "Label": This must be provided by a National Recognized Testing Laboratory (NRTL), or other entity approved by GSA. The burden of documentation for validation shall be provided by the Contractor.

- L. "Notice-to-Proceed" is the Contracting Officer's notification by letter to the Contractor to proceed with the Contract. Issuance of the Notice-to-Proceed may activate the time period for the completion of certain work, including Substantial Completion and Contract Completion.
- M. "Owner" is the Government.
- N. "Patching" refers to restoration of a surface to its original completed condition by filling, repairing, refinishing, closing and similar operations.
- O. "Project site" refers to the space available to the Contractor for performance of the Work, either exclusively or in conjunction with others performing other work.
- P. "Provide" means to furnish and install, complete in place and ready for full use.
- Q. "Punch List" is the entire listing of all incomplete and/or defective work including items that must be completed pursuant to Contract Completion.
- R. "Regulations" are found in the FAR, GSAM, and CFR including orders issued by the government.
- S. "Special Conditions" refer collectively to Division 00 Section "Supplementary Conditions" and any other sections with numbers starting with 00.
- T. "Substantial Completion" is defined in the Agreement, with additional conditions in Division 01 Section "Closeout Procedures."
- U. "Superintendent" refers to the Contractor's on-site representative who is responsible for continuous field supervision, coordination, planning, scheduling, and completion of the work and, unless another person is designated by the contract specification as the safety officer, jobsite safety.
- V. "Testing Agency" or "testing laboratory" is an independent entity engaged to perform specific inspections or tests, either at the Project site or elsewhere, and to report the results of those inspections and tests.
- W. Where "directed", "authorized", "selected", "approved", or a similar term is used in conjunction with the Contractor's submittals, applications, requests and other activities, and the specifications state that an individual other than the Contracting Officer, such as the Contracting Officer's Representative (COR), shall provide this action, it is understood that only the Contracting Officer has this authority unless the Contracting Officer provides written authorization to a different individual. The Contracting Officer shall provide the written authorization to the Contractor, upon request.
  - 1. When the individual is authorized by the Contracting Officer, the Contractor may still appeal the action to the Contracting Officer.
  - 2. The Contracting Officer's decision will be final, subject to the Disputes clause.

### 1.3 DRAWING SYMBOLS

- A. Except as otherwise indicated, symbols used on the Drawings are those symbols recognized in the construction industry.
  - 1. These include graphic symbols defined by "Architectural Graphic Standards", published by John Wiley & Sons, Inc., as well as graphic symbols recommended by

- ASHRAE, ASME, ASPE, CSI, IEEE and similar technical organizations for the mechanical and electrical Drawings.
2. The Contractor shall refer uncertainty or ambiguity as to meaning of symbols to the Contracting Officer for clarification before proceeding.

#### 1.4 INDUSTRY STANDARDS

- A. Applicability of Standards: The Contract Documents require the Contractor to meet, satisfy, or otherwise follow various industry standards. Unless otherwise stated in the Contract Documents, the industry standards are incorporated into the Contract Documents as an Exhibit and Other Attachment (see Agreement, Order of Precedence) by reference and are made a part of the Exhibits and Other Attachments as if fully set forth as an Exhibit and Other Attachment.
- B. Conflicting Requirements. Refer to the Agreement for the Order of Precedence clause and the latest version of GSA's P100 Facilities Standards.
- C. Publication Date. The publication date for any industry standard is the most recent version as of the date that the Government issues the Solicitation. When an applicable industry standard has been revised after contract award that may result in an increase in cost or time, the Contractor shall submit a change order proposal for the Government's consideration.
- D. Specialized Work. In certain instances, a Specification section may require that the Contractor engage a specialized company or individual to perform certain work. In such instances, the Contractor shall subcontract for such work. The Contractor may not perform any such work with its own, in-house employees.
- E. Abbreviations and Acronyms used in the Specifications and other Contract Documents mean the recognized name of a trade association, standards-producing organization, and authority having jurisdiction or other entity applicable to the context of the particular provision. Except as otherwise indicated, refer to the current editions of the following publications for abbreviations:
  1. "Encyclopedia of Associations: National Organizations of the U.S.", published by Gale Research.
  2. "National Trade and Professional Associations of the United States", published by Columbia Books.
  3. "Means Illustrated Construction Dictionary - New Unabridged Edition" published by R.S. Means Company, Inc.
  4. "Abbreviations and Acronyms," paragraphs A. through E. identified herein.
- F. Abbreviation and Acronyms Listing. The following names are subject to change and are believed, but are not assured, to be accurate and up-to-date as of the date of the Contract Documents.
  1. AA- Aluminum Association
  2. AABC - Associated Air Balance Council
  3. AAMA - American Architectural Manufacturers Association
  4. AATCC - American Association of Textile Chemists and Colorists
  5. ABMA - American Bearing Manufacturers Association
  6. ABMA - American Boiler Manufacturers Association
  7. ACI - American Concrete Institute
  8. ACIL - American Council of Independent Laboratories
  9. AISET - The Association of Independent Scientific, Engineering, and Testing Firms
  10. ACPA - American Concrete Pipe Association
  11. ADC - Air Diffusion Council
  12. AEIC - Association of Edison Illuminating Companies
  13. AFBMA - Anti-Friction Bearing Manufacturers Association (See ABMA)

14. AFPA - American Forest and Paper Association
15. AGA - American Gas Association
16. AGC - Association of General Contractors
17. AHA - American Hardboard Association
18. AHAM - Association of Home Appliance Manufacturers
19. AIA - The American Institute of Architects
20. AIHA - American Industrial Hygiene Association
21. AISC - American Institute of Steel Construction
22. AISI - American Iron and Steel Institute
23. AITC - American Institute of Timber Construction
24. ALA - American Laminators Association (See LMA)
25. ALI - American Lighting Institute
26. ALI - Associated Laboratories, Inc.
27. ALSC - American Lumber Standards Committee
28. AMCA - Air Movement and Control Association International, Inc.
29. ANSI - American National Standards Institute
30. AOAC - Association of Official Analytical Chemists International
31. APA - American Plywood Association (see EWA)
32. API - American Petroleum Institute
33. ARI - Air-Conditioning and Refrigeration Institute
34. ASA - Acoustical Society of America
35. ASC - Adhesive and Sealant Council
36. ASCA - Architectural Spray Coaters Association
37. ASCE - American Society of Civil Engineers
38. ASHRAE - American Society of Heating, Refrigerating and Air Conditioning Engineers.
39. ASME - American Society of Mechanical Engineers
40. ASPE - American Society of Plumbing Engineers
41. ASQ - American Society for Quality
42. ASSE - American Society of Sanitary Engineering
43. ASTM - American Society for Testing and Materials
44. ATIS - Alliance for Telecommunications Industry Solutions
45. ATS - Automatic Transfer Switch
46. AWC - Association of the Wall and Ceiling Industries International
47. AWCMA - American Window Covering Manufacturers Association (See WCMA)
48. AWI - Architectural Woodwork Institute
49. AWWA - American Water Works Association
50. AWS - American Welding Society
51. AWWA - American Water Works Association
52. BAS - Building Automation System
53. BHMA - Builders Hardware Manufacturers Association
54. BIFMA - The Business and Institutional Furniture Manufacturer's Association International
55. BIM - Building Information Model
56. BOD - Basis of Design
57. CABO - Council of American Building Officials
58. CAGI - Compressed Air and Gas Institute
59. CAUS - Color Association of the United States
60. CBHF - State of California, Department of Consumer Affairs, Bureau of Home Furnishings and Thermal Insulation Technical Information
61. CC - Construction Contractor
62. CE - Construction or Consulting Engineer
63. CEx - Contract Executive
64. CCC - Carpet Cushion Council
65. CDA - Copper Development Association Inc.
66. CE - Corps of Engineers (U.S. Department of the Army)

67. CFFA - Chemical Fabrics & Film Association, Inc.
68. CFR - Code of Federal Regulations (Publications available from the Government Printing Office)
69. CGA - Compressed Gas Association
70. Cisca - Ceilings and Interior Systems Construction Association
71. CISPI - Cast Iron Soil Pipe Institute
72. CPM - CM Project Manager
73. CM - Construction Manager
74. CO - Contracting Officer
75. CORPS - Army Corps of Engineers
76. COTR - Contracting Officer's Technical Representative
77. COBIE - Construction to Operations Building Information Exchange
78. CPA - Composite Panel Association
79. CPPA - Corrugated Polyethylene Pipe Association
80. CPSC - Consumer Product Safety Commission
81. CRI - Carpet and Rug Institute
82. CRSI - Concrete Reinforcing Steel Institute
83. CS - Commercial Standard (U.S. Department of Commerce)
84. CSI - Construction Specifications Institute
85. CTI - Ceramic Tile Institute of America
86. DHI - Door and Hardware Institute
87. DIPRA - Ductile Iron Pipe Research Association
88. DLPA - Decorative Laminate Products Association
89. DOC - Department of Commerce (Publications available from the Government Printing Office)
90. DOJ - Department of Justice
91. DOT - Department of Transportation
92. DP - Design Professional
93. ECSA - Exchange Carriers Standards Association (See ATIS)
94. EIA - Electronic Industries Association
95. EJMA - Expansion Joint Manufacturers Association
96. EPA - Environmental Protection Agency
97. EPCA 2005 - Energy Policy Act of 2005
98. EISA Energy Independence and Security Act of 2007
99. EWA - Engineered Wood Association
100. FAA - Federal Aviation Administration
101. FCC - Federal Communications Commission
102. FCI - Fluid Controls Institute
103. FCICA - Floor Covering Installation Contractors Association
104. FDA - US Food and Drug Administration
105. FGMA - Flat Glass Marketing Association (See GANA)
106. FHA - Federal Housing Administration (U.S. Department of Housing and Urban Development)
107. FM - Factory Mutual System
108. FMR - Federal Management Regulation
109. FPE - Fire Protection Engineer
110. FPS - Federal Protective Service
111. FPT - Functional Performance Test
112. FS - Federal Specification (Publications available from GSA)
113. FSC - Forest Stewardship Council
114. FTI - Facing Tile Institute
115. GA - Gypsum Association
116. GANA - Glass Association of North America
117. GRI - Geosynthetic Research Institute
118. GSA - General Services Administration
119. HEI - Heat Exchange Institute



120. HFES - Human Factors and Ergonomics Society
121. HI - Hydronics Institute - Division of Gas Appliance Manufacturers Association
122. HMA - Hardwood Manufacturers Association
123. HPVA - Hardwood Plywood and Veneer Association
124. IALD - International Association of Lighting Designers
125. IAS - International Approval Services - Division of Canadian Standards Association
126. ICEA - Insulated Cable Engineers Association
127. IEC - International Electrotechnical Commission (Publications available from ANSI)
128. IES - Illuminating Engineering Society
129. IEEE - Institute of Electrical and Electronics Engineers
130. IESNA - Illuminating Engineering Society of North America
131. IGCC - Insulating Glass Certification Council
132. IIDA - International Interior Design Association
133. IMSA - International Municipal Signal Association
134. INCE - Institute of Noise Control Engineering
135. ISA - International Society for Measurement and Control
136. ISC - Interagency Security Committee
137. ISEA - Industrial Safety Equipment Association
138. ISS - Iron and Steel Society
139. LEED - Leadership in Energy and Environmental Design
140. LGSI - Light Gage Structural Institute
141. LIA - Lead Industries Association, Inc.
142. LMA - Laminating Materials Association
143. LPI - Lightning Protection Institute
144. MCAA - Mechanical Contractors Association of America
145. MFMA - Metal Framing Manufacturers Association
146. MHIA - Material Handling Industry Association
147. MIA - Marble Institute of America
148. MIL - Military Standardization Documents (U.S. Department of Defense)
149. MILCON - Military Construction
150. ML/SFA - Metal Lath/Steel Framing Association
151. MSS - Manufacturers Standardization Society of the Valve and Fittings Industry
152. NAAMM - National Association of Architectural Metal Manufacturers
153. NAAMM - North American Association of Mirror Manufacturers (See GANA)
154. NACE - National Association of Corrosion Engineers International
155. NAIMA - North American Insulation Manufacturers Association
156. NAMI - National Accreditation & Management Institute, Inc.
157. NBHA - National Builders Hardware Association (See DHI)
158. NBIMS - National Building Information Model Standards
159. NBS - National Bureau of Standards
160. NIBS - National Institute of Building Sciences
161. NIST - National Institute of Standards and Technology
162. NCAC - National Council of Acoustical Consultants
163. NCCA - National Coil Coaters Association
164. NCMA - National Concrete Masonry Association
165. NCPI - National Clay Pipe Institute
166. NCRPM - National Council on Radiation Protection and Measurements
167. NCSPA - National Corrugated Steel Pipe Association
168. NEBB - Natural Environmental Balancing Bureau
169. NEC - National Electrical Code
170. NECA - National Electrical Contractors Association
171. NEI - National Elevator Industry
172. NEMA - National Electrical Manufacturers Association
173. NETA - InterNational Electrical Testing Association

- 174. NFPA - National Fire Protection Association
- 175. NFRC - National Fenestration Rating Council Incorporated
- 176. NGA - National Glass Association
- 177. NHLA - National Hardwood Lumber Association
- 178. NIA - National Insulation Association
- 179. NIAC - National Insulation and Abatement Contractors Association (See NIA)
- 180. NIST - National Institute of Standards and Technology (U.S. Department of Commerce)
- 181. NPCA - National Paint and Coatings Association
- 182. NRCA - National Roofing Contractors Association
- 183. NRMCA - National Ready-Mixed Concrete Association
- 184. NRTL - Nationally Recognized Testing Laboratory
- 185. NSA - National Stone Association
- 186. NSF - National Sanitation Foundation International
- 187. NVLAP - National Voluntary Laboratory Accreditation Program (via NIST)
- 188. NUSIG - National Uniform Seismic Installation Guidelines
- 189. NWFA - National Wood Flooring Association
- 190. NWMA - National Woodwork Manufacturers Association (See NWWDA)
- 191. NWWDA - National Wood Window and Door Association
- 192. O & M - Operations & Maintenance
- 193. OSHA - Occupational Safety and Health Administration (U.S. Department of Labor)
- 194. P100 - GSA Facilities Standards for the Public Building Service (PBS)
- 195. PATMI - Powder-Actuated Tool Manufacturers' Institute
- 196. PCA - Portland Cement Association
- 197. PCI - Precast/Prestressed Concrete Institute
- 198. PDCA - Painting and Decorating Contractors of America
- 199. PDI - Plumbing and Drainage Institute
- 200. PDS - Program Development Study
- 201. PEI - Porcelain Enamel Institute
- 202. PMO - GSA PBS Program or Project Management Office?
- 203. POR - Program Of Requirements
- 204. PPFA - Plastic Pipe and Fittings Association
- 205. PPI - Plastics Pipe Institute (The Society of the Plastics Industry, Inc.)
- 206. PS Product Standards of the National Bureau of Standards (U.S. Department of Commerce)
- 207. QAQC - Quality Assurance Quality Control
- 208. RCSC - Research Council on Structural Connections
- 209. RFCI - Resilient Floor Covering Institute
- 210. RFP - Request For Proposal
- 211. RIEI - Roofing Industry Education Institute
- 212. RMA - Rubber Manufacturers Association
- 213. SAE - Society of Automotive Engineers International
- 214. SAMA - Scientific Apparatus Makers' Association
- 215. SDI - Steel Deck Institute (where referenced within Division 05 sections)
- 216. SDI - Steel Door Institute (where referenced within Division 08 sections)
- 217. SEFA - Scientific Equipment and Furniture Association
- 218. SEGDC - Society for Environmental Graphic Design
- 219. SFPE - Senior Fire Protection Engineer
- 220. SGCC - Safety Glazing Certification Council
- 221. SHLMA - Southern Hardwood Lumber Manufacturers Association (See HMA)
- 222. SIGMA - Sealed Insulating Glass Manufacturers Association
- 223. SJI - Steel Joist Institute
- 224. SMA - Screen Manufacturers Association
- 225. SMACNA - Sheet Metal and Air Conditioning Contractors' National Association
- 226. SPI - The Society of the Plastics Industry, Inc.
- 227. SPIB - Southern Pine Inspection Bureau

- 228. SSINA - Specialty Steel Industry of North America
- 229. SSPC - Steel Structures Painting Council - The Society for Protective Coatings
- 230. SWRI - Sealant, Waterproofing and Restoration Institute
- 231. TAB - Testing, Adjusting and Balancing Bureau
- 232. TCA - Tile Council of America
- 233. TIMA - Thermal Insulation Manufacturers Association (See NAIMA)
- 234. TRB - Transportation Research Board - National Research Council
- 235. UFAC - Upholstered Furniture Action Council
- 236. UL - Underwriters Laboratories Inc.
- 237. USDA - U.S. Department of Agriculture
- 238. USGBC - U.S. Green Building Council
- 239. USMS - U.S. Marshals Service
- 240. USPS - U.S. Postal Service
- 241. VOC - Volatile Organic Compound
- 242. WA - Wall-coverings Association
- 243. WASTEC - Waste Equipment Technology Association
- 244. WCMA - Window Covering Manufacturers Association
- 245. WEF - Water Environment Federation
- 246. WMMPA - Wood Moulding & Millwork Producers Association
- 247. WPCF - Water Pollution Control Federation (See WEF)
- 248. WRI - Wire Reinforcement Institute
- 249. WSC - Water Systems Council
- 250. WSFI - Wood and Synthetic Flooring Institute (See MFMA)
- 251. WWPA - Western Wood Products Association
- 252. W.W.P.A. - Woven Wire Products Association

PART 2 - PRODUCTS (Not applicable)

PART 3 - EXECUTION (Not applicable)

**END OF SECTION 01 42 00**

## SECTION 01 50 00 - TEMPORARY FACILITIES AND CONTROLS

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including Federal Acquisition Regulations (FAR) and General Services Administration Acquisition Regulations (GSAR) contract clauses, General and Supplementary Conditions, and Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. This section includes requirements for temporary utilities, support facilities and protection.
  - 1. Temporary utilities include but are not limited to the following:
    - a. Temporary water service and distribution.
    - b. Temporary electric power and lighting.
    - c. Temporary heat and ventilation.
    - d. Temporary telephone service.
    - e. Temporary sanitary facilities, including drinking water.
    - f. Storm and sanitary sewer.
  - 2. Support facilities include but are not limited to the following:
    - a. Field offices, storage sheds and fabrication shops.
    - b. Dewatering facilities and drains.
    - c. Temporary lifts and hoists.
    - d. Waste disposal services.
    - e. Rodent and pest control.
    - f. Other construction aids and miscellaneous services and facilities.
  - 3. Protection includes but is not limited to the following:
    - a. Temporary fire protection.
    - b. Barricades, warning signs and lights.
    - c. Environmental protection.
    - d. Enclosure partitions.
- B. Provide temporary facilities and controls required for construction activities, except for facilities and controls indicated as existing or provided by the Government or others.

#### 1.3 UTILITY USE CHARGES

- A. Water Service: The Contractor may use water from the Government's existing water system, without metering and without payment of use charges.
- B. Sewer Service: Contractor may use the Government's existing sewer system, without payment of use charges.
- C. Electric Power Service: Contractor may use electric power from the Government's existing electric power system, without metering and without payment of use charges.

#### 1.4 SUBMITTALS

- A. Site Plan: Show temporary facilities, utility hookups, and staging areas for construction personnel.
- B. Reports: Submit reports of tests, inspections, meter readings and similar procedures for temporary utilities.

#### 1.5 QUALITY ASSURANCE

- A. Standards and Regulations: In temporary facilities, comply with industry standards, applicable laws, and regulations of authorities having jurisdiction, including but not limited to the following:
  - 1. Building code requirements.
  - 2. Health and Safety regulations.
  - 3. Utility company regulations.
  - 4. Police, fire department, local fire marshal and rescue squad rules.
  - 5. Environmental protection regulations.
  - 6. For temporary egress, ABAAS regulations.
  - 7. NFPA 241 "Standards for Safeguarding Construction, Alterations and Demolition Operations".
  - 8. ANSI-A10 Series standards for "Safety Requirements for Construction and Demolition".
  - 9. NECA Electrical Design Library "Temporary Electrical Facilities", NFPA 70, and NEMA, NECA and UL standards and regulations for temporary electric service.
- B. Inspections: Arrange for authorities having jurisdiction to inspect and test each temporary utility before use. Obtain required certifications and permits.

#### 1.6 PROJECT CONDITIONS

- A. Install, operate, maintain and protect temporary facilities and controls.
  - 1. Keep temporary facilities clean and neat in appearance.
  - 2. Operate temporary facilities in a safe and efficient manner.
  - 3. Relocate temporary facilities if needed as Work progresses.
  - 4. Do not overload temporary services and facilities or permit them to interfere with progress.
  - 5. Provide fire prevention.
  - 6. Do not allow hazardous, dangerous or unsanitary conditions, or public nuisances to be on-site.
- B. At the earliest possible time, when acceptable to GSA, change over from temporary services to use of permanent services and remove temporary facilities when no longer needed.
- C. Temporary Use of Permanent Facilities and Services: Contractor shall assume responsibility for the operation, maintenance and protection of the facility and each permanent service during its use as a construction facility prior to the Government's acceptance.
- D. Existing Equipment and Items: Cover or otherwise protect and provide security for existing equipment and other items that are to remain in place, to prevent soiling, damage and loss, the cost of which is the responsibility of the Contractor.
  - 1. Temporarily move equipment and other items that interfere with the performance of required work.

2. Store equipment and other items that have been temporarily removed. Upon reinstallation, clean and, if damaged, repair or replace equipment and items to match their condition prior to removal.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

- A. Provide undamaged materials in serviceable conditions and suitable for use intended.
- B. Tarpaulins: Waterproof, fire-resistant UL labeled with flame spread rating of 15 or less. For temporary enclosures, provide translucent, nylon-reinforced, laminated polyethylene fire-retardant tarpaulins.
- C. Water: Shall be potable and approved by local health authorities.
- D. Wood: Lumber complying with DOC PS 20 and applicable grading rules of an inspection agency certified by ALSC's Board of Review for specific use. Provide preservative treated lumber where partially or fully in contact with the earth, concrete or masonry. Provide fire-retardant-treated lumber for temporary purposes where fire-rated products are normally required.
- E. Dust control:
  1. Dust Control Adhesive-Surface Walk-off Mats: Provide mats minimum 914 by 1624 mm (36 by 60 inches).
  2. Polyethylene Sheet: Reinforced, fire-resistive sheet, 0.25 mm (10 mils) minimum thickness, with flame-spread rating of 15 or less per ASTM E 84 and passing NFPA 701 Test 2.
- F. Temporary Lighting (specify minimum foot candles and OSHA requirements).

### 2.2 EQUIPMENT

- A. Provide equipment in serviceable condition and suitable for use intended.
  1. Water Hoses: 3/4" (19 mm) heavy duty abrasive-resistant flexible rubber hoses, 100 feet (30 m) long with pressure rating greater than the maximum pressure of the water distribution system. Provide adjustable shut off nozzles at hose discharge
  2. Electric Outlets: NEMA-polarized outlets to prevent insertion of 110 to 120 Volt plugs into higher voltage outlets. Provide receptacle outlets equipped with ground fault circuit interrupters, reset button and pilot light for connection of power tools and equipment.
  3. Electric Power Cords: Grounded extension cords.
    - a. Provide hard-service cords where exposed to abrasion or traffic.
    - b. Provide waterproof connectors to connect separate lengths of electric cords where single lengths will not reach areas of construction activity.
    - c. Do not exceed safe length-voltage ratio.
  4. Lamps and Light Fixtures: General-service lamps of wattage required for adequate illumination.
    - a. Provide guard cages or tempered glass enclosures where exposed to breakage.
    - b. Provide exterior fixtures when exposed to moisture.
  5. Heating Units: Temporary heating units that have been tested and labeled by UL, FM or another recognized trade association related to the type of fuel consumed.

## PART 3 - EXECUTION

### 3.1 INSTALLATION

- A. Use qualified personnel for installation of temporary facilities.
- B. Locate facilities where they will serve the project with minimum interference to performance of construction activities. Maintain, relocate and modify facilities as required for the duration of the performance of the Work.

### 3.2 TEMPORARY UTILITIES

- A. Engage the appropriate local utility companies to install temporary services or connect to existing services. Where a utility company provides only part of a service, provide the remainder with matching and compatible materials and equipment in compliance with utility company recommendations. Coordinate interruptions and outages with GSA Building Manager and any affected stakeholders, provide adequate utility capacities, and obtain easements if necessary. At Substantial Completion, restore these facilities to condition existing before initial use.
  - 1. Electric Power Service: Provide weatherproof grounded electric power service and distribution system of sufficient size, capacity and power characteristics for construction needs. Include meters, transformers, overload-protected disconnects, automatic ground-fault interrupters and main distribution switchgear.
  - 2. Lighting: Install and operate temporary lighting that will fulfill security and protection requirements without operating the entire system. Provide lighting that provides adequate illumination for construction operations and traffic conditions.
    - a. Install and operate temporary lighting that fulfills security and protection requirements of GSA without operating entire system.
  - 3. Heat, Cooling and Ventilation: Provide temporary heat, cooling and ventilation required for the construction activities, including but not limited to curing or drying completed installations and protecting construction from adverse effects of low temperatures and high humidity. Use safe equipment that will not have a harmful effect on elements being installed and on completed installations. Coordinate ventilation requirements to produce the ambient condition required for the work and to minimize energy consumption, and to protect personnel from fumes and other harmful effects. Avoid storing any odor-producing equipment or materials near fresh air intakes.
  - 4. Heating Facilities: Provide vented self-contained heaters with individual space thermostatic control. Do not use gasoline-burning space heaters or other open flame devices.
  - 5. Telephone Service: Minimally provide a separate telephone hard line for each temporary office and first-aid station, and provide a dedicated telephone hard line for a fax machine in the Contractor's field office.
  - 6. Provide data/internet and/or WI-FI service.
  - 7. Water Service: Install temporary water service and distribution piping of sizes and pressures adequate for construction needs. Sterilize water piping prior to use.
  - 8. Sewers and Drainage: Provide temporary utilities to remove effluent lawfully.
  - 9. Sanitary Facilities: Provide for toilets, wash facilities and drinking water fixtures in compliance with regulations and health codes for type, number, location, operation and maintenance of fixtures and facilities. Provide toilet tissue, paper towels, paper cups and

similar disposable materials as appropriate for each facility, and provide covered waste containers for used materials.

- a. Wash Facilities: Install wash facilities supplied with potable water at convenient locations for personnel involved in handling materials that require wash-up for a healthy and sanitary condition.
  - 1) Dispose of drainage per regulations.
  - 2) Supply cleaning compounds appropriate for each condition.
  - 3) Include safety showers, eyewash fountains and similar facilities for the convenience, safety and sanitation of personnel.

- B. Telephone: Provide a cellular phone for the Contractor's Superintendent's use. Distribute cellular phone number to Contracting Officer's Representative and Field Office personnel during the pre-construction meeting. Contractor's and subcontractor's personnel are not permitted to use existing telephone system in the building

### 3.3 TEMPORARY SUPPORT FACILITIES

- A. Provide incombustible construction per ASTM E 136 for offices, shops and sheds located within the construction area or within 9 m (30') of building lines. Comply with NFPA 241.
- B. Offices: Provide insulated, weather-tight temporary offices of sufficient size to accommodate office personnel at the Project site. Include space for meetings. Maintain offices clean and orderly. Furnish and equip offices for use.
  - 1. Furniture: Minimally provide desks, chairs, file cabinets, plan table, plan rack and bookcase.
  - 2. Meeting Space: Provide a room of not less than 240 sq. feet (22.5 sq. m) for project meetings. Furnish meeting room with conference table, tack board and not less than ten (10) chairs.
  - 3. Electronic Communication service with computers, printers, projector for computer presentations, and related equipment necessary for the project, and for occasional use by others. Capacities and programs shall be adequate to fully interact with all stakeholders, and to handle the programs used in pursuit of the Work.
- C. Storage Sheds and Fabrication Shops: Provide sheds and shops that are sized, furnished and equipped to accommodate materials and equipment involved. Include complete temporary utility services for intended use. Sheds and shops may be open shelters or fully enclosed spaces, as appropriate for protection of equipment and materials.
- D. Temporary Cranes, Lifts and Hoists: Provide protection of facilities, personnel and landscaping for hoisting materials.
- E. Existing Elevator Use: Use of GSA's existing freight elevator will be permitted. Elevators must be protected, cleaned and maintained in a condition acceptable to GSA. At Substantial Completion, restore elevators to condition existing before initial use, including replacing worn cables, guide shoes, and similar items of limited life.
  - 1. Do not load elevators beyond their rated weight capacities.
  - 2. Provide protective coverings, barriers, devices, signs, or other procedures to protect elevator car and entrance doors and frame. If, despite such protection, elevators become damaged, engage elevator Installer to restore damaged work so that no evidence remains of correction work. Return items that cannot be refinished in field to the shop, make required repairs and refinish entire unit, or provide new units as required.



3. If required by local jurisdiction or union, provide temporary phones for elevators. Coordinate with Elevator maintenance contractor and GSA Building Manager.
  - F. Temporary Use of Permanent Stairs: Use of new stairs for construction traffic will be permitted, provided stairs are protected and finishes restored to new condition at time of Substantial Completion. If permanent stairs are unavailable, provide temporary stairs where ladders are not adequate.
  - G. Project Identification Signs and Other Temporary Signs: Construction signs are to be 12' by 6' and constructed of a durable, weather-resistant material, properly and securely framed and mounted. The sign will be blue with white lettering, and mounted at least 4' above the ground. The sign must include the GSA logo no less than 16" square. The lettering, graphic style and format should be compatible with the architectural character of the building. Provide project identification and other signs of sizes, layout, content, graphics and colors indicated. Locate signs where best to inform public and instruct persons seeking entrance to the project. Support signs on posts or framing of steel or wood-treated against rot.
    1. Other Temporary Signs: Prepare signs to provide directional information to construction personnel and visitors.
    2. Do not permit installation of unauthorized signs.
  - H. Collection and Disposal of Waste/Salvaged Material: Collect waste from construction areas and elsewhere daily. Collect salvaged/recycled material from construction areas and elsewhere as necessary. Enforce requirements strictly and dispose of material lawfully.
    1. Comply with NFPA 241 for removal of combustible waste material and debris.
    2. Do not hold waste materials more than 7 days during periods when the ambient temperature remains continuously less than 80°F (27°C), or more than 3 days when the temperature exceeds or is expected to rise above 80° (27°C).
    3. Handle and properly containerize hazardous, dangerous or unsanitary waste materials separately from other waste.
    4. Comply with Construction Waste Management and Disposal requirements in Division 01 Section "Construction Non-Hazardous Waste Management and Disposal."
  - I. Rodent and Pest Control: Retain a local exterminator or pest control company to recommend practices to minimize attraction and harboring of rodents, roaches and other pests. Employ this service to perform extermination and control procedures at regular intervals so the project will be free of pests and their residue at completion. Perform control operations lawfully, using environmentally safe materials. Segregate hazardous and unsanitary waste from other waste materials.
- 3.4 TEMPORARY PROTECTION FACILITIES
- A. Temporary Facility Changeover: Except for using permanent fire protection facilities as soon as available, do not change over from temporary protection facilities until authorized by GSA.
  - B. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction as required to comply with environmental regulations and that minimize possible air, stormwater, sanitary, waterway, and subsoil contamination or pollution or other undesirable effects. Restrict use of noise-making tools and equipment to hours that will minimize complaints from persons near the site. When working in or near existing facilities, provide dustproof enclosures for protection where dirty work is performed. Dampen debris when removed to avoid dusting.

1. Comply with work restrictions specified in Division 01 Section "Summary."
- C. Safeguarding Construction and Demolition: Until fire protection needs are supplied by permanent facilities, install and maintain temporary fire protection measures and devices of types needed to protect against reasonably predictable and controlled fire losses.
1. Comply with NFPA 10 "Standard for Portable Fire Extinguishers" and NFPA 241 "Standard for Safeguarding Construction, Alterations, and Demolition Operations".
  2. Locate fire extinguishers where convenient and effective for their intended purpose, but not less than one extinguisher at or near each access route exit or entrance, including stairwells on each floor.
  3. Store combustible materials in containers in fire-safe locations.
  4. Maintain unobstructed access to fire extinguishers, fire hydrants, temporary fire protection facilities and access routes. Prohibit smoking in hazardous fire-exposure areas.
  5. Provide supervision of welding operations, combustion-type temporary heating units and other sources of fire ignition.
  6. Safeguarding Demolition and Construction:
    - a. Prepare and submit an Action Plan of requirements for fire safety, to be provided during both project demolition and construction, based both on NFPA 241 and the *International Fire Code*. Topics to be addressed include, but are not limited to the following:
      - 1) Development of an emergency action plan, procedures for fire reporting, etc.;
      - 2) Temporary enclosures, including FRT plywood, fire-retardant tarpaulins and plastic films that comply with NFPA 701;
      - 3) Housekeeping and debris removal;
      - 4) Performance of hot work and permitting system in accordance with NFPA 51B;
      - 5) Procedures for impairment of sprinkler system and tagging of closed valves and other associated system components (to be coordinated with building management);
      - 6) Requirements for flammable and combustible liquids (as applicable), including marking storage areas with NFPA 704 placards, description of means to dispose of leakage or spills, etc.;
      - 7) Electrical requirements, including temporary wiring and lighting;
      - 8) Jobsite fire safety inspections, including both daily and weekly inspection items (Records must be maintained for inspection).
- D. Permanent Fire Protection: At the earliest feasible date in each area of the Project, complete installation of the permanent fire protection facilities including connected services, and place into operation and use. Instruct key personnel in the use of the facilities.
- E. Security Enclosure and Lockup: Install substantial temporary enclosure of partially-completed areas of construction. Provide locking entrances to prevent unauthorized entrance, vandalism, theft and similar violations of security.
1. Storage: Provide a secure lockup for valuable stored materials and equipment.
  2. Enforce discipline in connection with the installation and release of material to minimize the opportunity for theft and vandalism.
- F. Reusable Temporary Partitions: Provide pre-manufactured, non-load-bearing, floor-to-ceiling dustproof partitions to limit dust and dirt migration, and to separate areas occupied by tenants from fumes and noise.
1. Basis-of-Design: MallForms, as manufactured by Top Deck Systems, Inc.
    - a. Fire Rating: Class A.
    - b. Panel Finish: As selected by the Architect from the manufacturer's full range.

2. Construct vestibule and airlock at each entrance through temporary partition with not less than 48 inches (1219 mm) between doors. Maintain water-dampened foot mats in vestibule.
3. Where fire-resistance-rated temporary partitions are indicated or are required by authorities having jurisdiction, construct partitions according to the rated assemblies.
4. Insulate partitions to control noise transmission to occupied areas.
5. Seal joints and perimeter. Equip partitions with gasketed dustproof doors and security locks where openings are required.
6. Protect air-handling equipment.
7. Provide walk-off mats at each entrance through temporary partition.

### 3.5 MOISTURE CONTROL

- A. Contractor's Moisture-Protection Plan: Avoid trapping water in finished work. Document visible signs of mold that may appear during construction. Remove and replace any materials contaminated by mold in accordance with applicable environmental procedures by EPA, OSHA or any other regulating authorities.
- B. Partially-Enclosed Construction Phase: Before full conditioning of building, when installed materials are still subject to infiltration of moisture and ambient mold spores, protect as follows:
  1. Do not load or install drywall or other porous materials or components, or items with high organic content, into partially enclosed building.
  2. Keep interior spaces reasonably clean and protected from water damage.
  3. Periodically collect and remove waste containing cellulose or other organic matter.
  4. Discard or replace water-damaged material.
  5. Do not install material that is wet.
  6. Discard, replace or clean stored or installed material that begins to grow mold.
  7. Perform work in a sequence that allows any wet materials adequate time to dry before enclosing the material in drywall or other interior finishes.
- C. Controlled Construction Phase of Construction: Prior to the full operation of permanent HVAC systems, maintain as follows:
  1. Control moisture and humidity inside building by maintaining effective dry-in conditions.
  2. Use permanent HVAC system to control humidity.
  3. Comply with manufacturer's written instructions for temperature, relative humidity, and exposure to water limits.
    - a. Hygroscopic materials that may support mold growth, including wood and gypsum-based products, that become wet during the course of construction and remain wet for 48 hours are considered defective.
    - b. Measure moisture content of materials that have been exposed to moisture during construction operations or after installation. Record readings beginning at time of exposure and continuing daily for 48 hours. Identify materials containing moisture levels higher than allowed. Report findings in writing to Architect.
    - c. Remove materials that cannot be completely restored to their manufactured moisture level within 48 hours.

### 3.6 OPERATION, TERMINATION AND REMOVAL

- A. Supervision: Enforce strict discipline in use of temporary facilities. Limit availability of temporary facilities to essential uses to minimize waste and abuse.

- B. Maintenance: Maintain facilities in good operating condition until removal. Protect from damage by freezing temperatures and similar elements.
  - 1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis to avoid possibility of damage.
  - 2. Protection: Prevent water-filled piping from freezing. Maintain markers for underground lines. Protect underground lines from damage during excavation operations.
- C. Termination and Removal: Unless GSA requests that a temporary facility be maintained longer, each temporary facility shall be removed not later than at Substantial Completion when the need for its service has ended and can be replaced by use of a permanent facility. Complete, restore, and replace permanent construction that may have been delayed and damaged because of interference with the temporary facility.
  - 1. Materials and facilities that constitute temporary facilities are the property of the Contractor, except the Government reserves the right to take possession of project identification signs.
  - 2. Prior to project completion, replace, clean, and restore permanent facilities used during the construction period including, but not limited to, the following:
    - a. Replace air filters and clean inside of ductwork and housings.
    - b. Replace significantly worn parts and parts subject to unusual operating conditions.
    - c. Replace lamps burned out or noticeably dimmed by hours of use.
    - d. Comply with Division 01 Section "Closeout Procedures."

**END OF SECTION 01 50 00**

## SECTION 015639 - TREE AND PLANT PROTECTION

### 1.1 SUMMARY

- A. Section includes general protection and pruning of existing trees and plants that are affected by execution of the Work, whether temporary or permanent construction.

### 1.2 DEFINITIONS

- A. Protection Zone: Area surrounding individual trees, groups of trees, shrubs, or other vegetation to be protected during construction, and indicated on Drawings. For trees, the locations of all Critical Root Zones (CRZs) are defined as the area for each tree which contains the estimated minimal amount of both structural and feeder roots that must be protected to minimize tree damage and retain structural stability. The CRZ for each tree is calculated based on the Tree Species Tolerance to construction impacts and age class, as outlined in the International Society of Arboriculture's Best Management Practices: Managing Trees During Construction (K. Fite, T. Smiley, 2008). Although CRZs will differ by species and tree age, zones range from ½ foot per one inch DBH (diameter at breast height) to 1½ foot per one inch DBH. For example: two foot (2') DBH tree specie deemed non-sensitive would have a 12' protection zone. A 2' DBH tree specie deemed sensitive would have a 36' protection zone. Sensitivity is determined by species and as such protection requirements are outlined in the 'International Society of Aboricultures Best Management Practices: Managing Trees During Construction' (K. Fite, T. Smiley, 2008) If the species tolerance is unknown, then the 1½ foot per one inch DBH standard is assumed. Mixed groupings of trees will base the required area of protection on that area which is required for maintaining the health of the most sensitive individual species composing the cluster. GSA will assume the 1½ foot standard applies unless sufficient information detailing the contrary is provided. For large shrubs and groups of shrubs a protection area shall be provided equivalent to 1.5 times the diameter of the massing itself, unless otherwise indicated.

### 1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Samples: For each type of product such as organic mulch in sealed plastic bags labeled with composition of materials by percentage of weight, or material data sheets when truck measured, protection-zone range/snow fencing, root zone plywood protection, and protection-zone signage.
- C. Tree Pruning Schedule: Written schedule detailing scope and extent of pruning of trees to remain that interfere with or are affected by construction. This detailed schedule shall identify both limb and root pruning activities and be provided to GSA representative 30-60 days prior to proposed activities.
- D. A Certified Arborist Report (CAR) should be prepared and submitted to the GSA along with the topographic survey that clearly demonstrates the size, species, and condition of all existing trees and shrubbery on site. Detailed plans should be provided for those plants that will be impacted/removed.. This includes identifying proposed new tree locations and quantities, as well as the protection plan for existing trees during the construction activity. All proposed grade

changes affecting the protected site trees should be identified. Further this report should document existing conditions of trees and plantings indicated to remain, which establishes preconstruction conditions that might later be misconstrued as damage caused by construction activities.

- E. Certification: From arborist, certifying that trees indicated in the above Certified Arborist Report have in fact been protected and properly prepared for construction according to recognized standards and that trees were promptly and properly treated and repaired if damaged.

#### 1.4 INFORMATIONAL SUBMITTALS

- A. Maintenance Recommendations: From arborist, for care and protection of trees affected by construction during and after completing the Work.

#### 1.5 QUALITY ASSURANCE

- A. Arborist Qualifications: Certified Arborist as certified by ISA, licensed arborist in jurisdiction where Project is located, current member of ASCA, or registered Consulting Arborist as designated by ASCA.
- B. Preconstruction Conference: Include as part of the project's overall preconstruction conference.

#### 1.6 PROJECT CONDITIONS

- A. The following practices are prohibited within protection zones:
  - 1. Storage of construction materials, debris, or excavated material.
  - 2. Parking vehicles or equipment.
  - 3. Foot traffic.
  - 4. Erection of sheds or structures.
  - 5. Impoundment of water.
  - 6. Excavation or other digging unless otherwise indicated.
  - 7. Attachment of signs to or wrapping materials around trees or plants unless otherwise indicated.
- B. Do not direct vehicle or equipment exhaust toward protection zones.
- C. Prohibit heat sources, flames, ignition sources, and smoking within or near protection zones and organic mulch.

### PART 2 - PRODUCTS

#### 2.1 MATERIALS

- A. Topsoil: Natural or cultivated top layer of the soil profile or manufactured topsoil; containing organic matter and sand, silt, and clay particles; friable, pervious, and black or a darker shade of brown, gray, or red than underlying subsoil; reasonably free of subsoil, clay lumps, gravel, and

other objects more than 1/2" in diameter; and free of weeds, roots, and toxic and other non-soil materials.

- B. Organic Mulch: Shredded hardwood, shredded bark, wood and bark chips, pine needle mulch, free from deleterious materials.
- C. Protection-Zone Fencing: Fencing fixed in position and meeting one of the following requirements. Previously used materials may be used when inspected for condition and approved in writing by resident engineer.

Retain one or more of first five subparagraphs below for protection-zone fencing to suit Project; coordinate with details shown on Drawings. Insert requirements for paint and color if required.

- 1. Chain-Link Protection-Zone Fencing: Galvanized-steel fencing fabricated from minimum 1-inch opening, 0.148-inch- diameter wire chain-link fabric; with pipe posts, minimum 2-3/8-inch- OD line posts, and 2-7/8-inch- OD corner and pull posts; with 1-5/8-inch- OD top rails and 0.177-inch- diameter bottom tension wire; with tie wires, hog ring ties, and other accessories for a complete fence system.
  - 2. Plywood Protection-Zone Fencing: Plywood framed with four 2-by-4-inch rails, with 4-by-4-inch preservative-treated wood posts spaced not more than 8 feet apart.
  - 3. Wood Protection-Zone Fencing: Constructed of two 2-by-4-inch horizontal rails, with 4-by-4-inch preservative-treated wood posts spaced not more than 8 feet apart, and lower rail set halfway between top rail and ground.
  - 4. Plastic/Snow Protection-Zone Fencing: Plastic construction fencing constructed of high-density extruded and stretched polyethylene fabric with 2-inch maximum opening in pattern and supported by tubular or T-shape galvanized-steel posts spaced not more than 8 feet apart. High-visibility orange color, non-fading.
  - 5. Height of Fencing: Protective fencing should range between four feet (4') and eight feet-(8') in height. The specific height of each area of protection should be indicated on the Certified Arborist Report with justification.
  - 6. Gates: Swing access gates matching material and appearance of fencing, to allow for maintenance activities within protection zones.
- D. Protection-Zone Signage: Shop-fabricated, rigid plastic or metal sheet with attachment holes pre-punched and reinforced; legibly printed with non-fading lettering.

## PART 3 - EXECUTION

### 3.1 EXAMINATION AND PREPARATION

- A. A contracted Construction Manager (CM) on site shall examine the site to verify that temporary erosion- and sedimentation-control measures are in place. Verify that flows of water redirected from construction areas or generated by construction activity do not enter or cross protection zones.
- B. The GSA on site representative (i.e. GSA PM, COR or CM on site) shall notify in writing contractor to protect tree root systems from damage caused by runoff or spillage of noxious materials while mixing, placing, or storing construction materials. Protect root systems from ponding, eroding, or excessive wetting caused by dewatering operations.

- C. Protection Zones: Contractor shall mulch areas inside protection zones and other areas as indicated in the Certified Arborist Report with a four inch (4") to six inch (6") average thickness of organic mulch. No mulch shall be placed within six inches (6") of tree trunks.

### 3.2 ESTABLISHING PROTECTION ZONES

- A. Protection-Zone Fencing: Install protection-zone fencing along edges of protection zones in a manner that will prevent people from easily entering protected area except by entrance gates.
  - 1. Chain-Link Fencing: Install to comply with ASTM F 567 and with manufacturer's written instructions.
  - 2. Posts: Set or drive posts into ground one-third the total height of the fence without concrete footings. Where a post is located on existing paving or concrete to remain, provide appropriate means of post support acceptable to resident engineer.
  - 3. Access Gates: Install where indicated on drawing/Certified Arborist Report.
- B. Protection-Zone Signage: Install protection-zone signage in visibly prominent locations in a manner approved by the GSA on site representative (i.e. GSA PM, COR or CM on site) .
- C. Maintain protection-zone fencing and signage in good condition as acceptable to the GSA Contracting Officer (CO) and remove when construction operations are complete and equipment has been removed from the site.

### 3.3 CONSTRUCTION ACTIVITIES WITHIN CRITICAL ROOT ZONES

- A. In general no encroachment within the CRZ shall occur without the written permission of the GSA CO. The fieldwork shall not occur without the on-site presence of the Agency's representative or an approved arborist. If encroachment is permitted, the following preventative measures shall be employed:
  - 1. Soil protection: To mitigate soil compaction the CRZ must first be mulched with a minimum six (6) inch layer of mulch and/or plywood sheeting, as specified by the Agency/Arborist. Mulch should be maintained during the course of construction and carefully removed thereafter.
  - 2. Removal of existing infrastructure: Extreme care must be exercised in removing concrete or asphalt with the CRZ. All removal shall favor lifting as opposed to dragging.
  - 3. Methods of excavation: Any excavation required for utility or infrastructure installation within a CRZ or elsewhere on the site as designated by the Agency shall be done by hand or pneumatic excavation, or micro tunneling. Trenching shall not occur within the CRZ unless absolutely necessary and without prior agreement of the licensed GSA landscape professional or Arborist.
  - 4. Treatment of exposed roots: Where such excavation does occur for the removal of existing features or the installation of new work, the excavated area shall be backfilled immediately. Exposed roots shall be covered with burlap or other approved material, and kept constantly moist. Burlap shall be checked a minimum of two (2) times a day, once in the morning and once in the afternoon in order to maintain appropriate levels of moisture, until backfill is complete. If directed by the GSA CO, soaker hoses shall be installed to facilitate properly moist conditions of excavated areas.
  - 5. Grade reduction: Many tree roots occur within the top six to eight inches of the soil. Soil removal can result in the loss of tree roots. Soil removal within the tree protection zone is



prohibited without the written approval of the GSA CO. Soil removal methods are to be determined by the Agency/arborist. Any proposed removal of soil, and supervision of the removal, within the CRZ shall be performed under the supervision of an independent Consulting Arborist.

6. Grade Increase: The addition of soil can smother tree roots, by reducing the amount of water and oxygen reaching the soil area where tree roots occur. Fill up to three (3) inches additional depth may be permitted. A specific submission should be made to the GSA CO. Fill exceeding three (3) inches shall not occur without the prior installation of an aeration system or other detail such as tree well, retaining wall, or other similar feature and approved by a licensed GSA landscape professional/certified arborist. Planting beds that are installed within tree protection zones can only be done by hand, with minimal soil disturbance. No roots over 1-inch in diameter shall be cut. Plants shall not be placed within three (3) feet of the tree trunk.
7. Root Pruning: Clear and excavate by hand to the depth of the required excavation to minimize damage to root systems. Use narrow-tine spading forks, comb soil to expose roots, and cleanly cut roots as close to excavation as possible. Cut roots manually by digging a trench and cutting exposed roots with sharp pruning instruments; do not break, tear, chop, or slant the cuts. Do not use a backhoe or other equipment that rips, tears, or pulls roots.

### 3.4 CROWN PRUNING

- A. Prune branches that are affected by temporary and permanent construction. Prune branches as indicated in Certified Arborist Report or as identified by arborist in the field.
  1. Prune trees to remain to compensate for root loss caused by damaging or cutting root system. Provide subsequent maintenance during Contract period as recommended by arborist.
  2. Pruning Standards: Prune trees according to ANSI A300 (Part 1) and the International Society of Arboriculture's Best Management Practices: Managing Trees During Construction (K. Fite, T. Smiley, 2008).
  3. Cut branches with sharp pruning instruments; do not break or chop.
  4. Do not apply pruning paint to wounds.
- B. Chip the removed branches and stockpile in areas approved by the GSA on site representative (i.e. GSA PM, COR, Building Manager or CM on site).

### 3.5 FIELD QUALITY CONTROL

- A. Inspections: Engage a certified arborist to direct plant-protection measures in the vicinity of trees, shrubs, and other vegetation indicated to remain and to prepare inspection reports.

### 3.6 REPAIR AND REPLACEMENT

- A. General: Repair or replace trees, shrubs, and other vegetation indicated to remain or be relocated that are damaged by construction operations, in a manner approved by the GSA CO.

1. Have arborist perform the root cutting, branch pruning, and damage repair of trees and shrubs.
2. Treat damaged trunks, limbs, and roots according to arborist's written instructions.
3. Perform protection area repairs within 24 hours of incident.
4. Replace vegetation that cannot be repaired and restored to full-growth status, as determined by licensed GSA landscape professional.

### 3.7 DISPOSAL OF SURPLUS AND WASTE MATERIALS

- A. Disposal: Remove excess excavated material, displaced trees, trash and debris associated with this work, and legally dispose of them off Owner's property or as directed by the GSA on site representative (i.e. GSA PM, COR or CM on site) or licensed GSA landscape professional.

END OF SECTION 015639

## **SECTION 01 57 19 - CONSTRUCTION INDOOR AIR QUALITY (IAQ) MANAGEMENT**

### **PART 1 - GENERAL**

#### **1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including Federal Acquisition Regulations (FAR) and General Services Administration Acquisition Regulations (GSAR) contract clauses, General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

#### **1.2 SUMMARY**

- A. This Section includes requirements for the development of a Construction Indoor Air Quality Management Plan (alternately referred to as the Plan). The Plan shall be developed by the Contractor or other qualified party under contract to the Contractor as approved by the Contracting Officer. The Plan shall be implemented by the Contractor and the trade contractors throughout the duration of the project construction, and shall be documented per the Submittal Requirements of this Section.

#### **1.3 RELATED SECTIONS**

- A. All sections of the Specifications related to interior construction, MEP systems, and items affecting indoor air quality.
- B. Division 01 Section "Limits for Volatile Organic Compound Contents for Adhesives, Sealants, Paints and Coatings."
- C. Division 01 Section "Sustainable Design Requirements."
- D. Division 01 Section "General Commissioning Requirements."

#### **1.4 REFERENCE STANDARDS**

- A. The Steel Metal and Air Conditioner National Contractors Association (SMACNA) IAQ guidelines for Occupied Buildings under Construction, 2<sup>nd</sup> Edition 2007, ANSI/SMACNA 008- 2008, [www.smacna.org](http://www.smacna.org).
- B. ANSI / ASHRAE 52.2-1999, "Method of Testing General Ventilation Air-Cleaning Devices for Removal Efficiency by Particle Size", [www.ashrae.org](http://www.ashrae.org)
- C. United States Environmental Protection Agency, "Compendium of Methods for the Determination of Air Pollutants in Indoor Air."

#### **1.5 CONSTRUCTION IAQ MANAGEMENT PLAN - OVERVIEW**

- A. The General Contractor or other qualified party as noted in Section 1.2.A shall prepare and submit a Construction IAQ Management Plan to the Contracting Officer for approval. The Construction IAQ Management Plan shall meet the following criteria, based on the criteria of LEED CI v.2009:
1. Construction activities shall be planned to meet or exceed the standards included in Chapter 3 of the Sheet Metal and Air Conditioning National Contractors' Association (SMACNA) "IAQ Guidelines for Occupied Buildings under Construction", 2<sup>nd</sup> Edition 2007, ANSI/SMACNA 008-2008 (Chapter 3).
  2. Absorptive materials shall be protected from moisture damage when stored on-site and after installation.
  3. Filtration media shall be installed at each return air grille to protect ductwork and/or equipment used during the construction process, and replaced prior to occupancy.
  4. A Sequence of Finish Installation Plan shall be developed, highlighting measures to reduce the absorption of VOCs by materials that act as 'sinks'.
  5. Immediately prior to occupancy, the building shall be subject to an outside air flush out, OR, shall be subject to pre-occupancy air quality testing.

## 1.6 SUBMITTALS

- A. Submittal Requirements: The Contractor and/or sub-contractor shall submit the following required records and documents:
1. A copy of the draft and final versions of the Construction IAQ Management Plan, as defined in articles 1.5 and 3.1 of this Section. The draft Plan shall be submitted to the Contracting Officer for review and approval at least 30 days prior to the commencement of work.
    - a. A construction log identifying the start-up date and duration of all major Construction IAQ Management Plan control measures.
    - b. If HVAC systems are used during construction, include a schedule of filter replacements or change-outs. Filter information shall include manufacturer, model number, MERV rating, and location of where it was installed.
  2. Photographs that document the implementation of the Construction IAQ Management Plan throughout the course of the project construction, SMACNA control measures, and evidence absorptive materials were protected on-site from moisture damage. Examples include photographs of ductwork sealing and protection, temporary ventilation measures, and conditions of on-site materials storage (to prevent moisture damage). Photographs shall include integral date stamping, and shall be submitted with brief descriptions, or be referenced to project meeting minutes or similar project documents. A minimum of 30 photographs shall be submitted per building, showing conditions on a least five different occasions.
  3. Product Cut Sheets for filtration media used during construction and installed immediately prior to occupancy, with MERV values highlighted. Cut sheets shall be submitted with the Contractor or sub-contractor's stamp, as confirmation that the submitted products are the products installed in the project.
  4. A construction log identifying the procedures and conditions of the building flush-out or air quality testing.
    - a. For flush-outs, provide the start dates and the flush-out duration, plus the air flow rates, air temperatures, and relative humidity ranges maintained. If the flush-out is done in stages, identify the building locations as part of the log. After construction ends, prior to occupancy and with all interior finishes installed, install new filtration media and flush-out the building by supplying a total air volume of 14,000 cubic feet of outdoor air per square foot of floor area while maintaining an internal temperature of least 60°F and relative humidity no higher than 60-percent.

- b. For air quality testing, provide the dates of testing, the sampling locations, and the test results from the air quality testing agency. If retesting is required due to non-compliance with the referenced standard, provide a log of the flush-out procedures used prior to retesting, as well as the new retesting results. Conduct baseline IAQ testing after construction ends and prior to occupancy, using testing protocols consistent with the EPA Compendium of Methods for the Determination of Air Pollutants in Indoor Air, and as additionally detailed in the LEED Reference Guide for Interior Design and Construction, 2009 Edition.

## 1.7 DEFINITIONS

- A. Type 1 Materials: Materials and finishes that act as sources of VOC or particulate contamination. Type 1 materials can include "wet" products, such as paints, sealants, adhesives, caulks, sealers and fireproofing materials as well as "dry" products such floor coverings with plasticizers, and engineered wood with formaldehyde.
- B. Type 2 Materials: Materials and finishes which are woven, fibrous, or porous in nature, and tend to absorb chemicals or particulates released by Type 1 materials. Examples include textiles, carpeting, acoustical ceiling tiles and gypsum board. Type 2 materials can become "sinks" for deleterious substances which may be released later, or collectors of contaminants that may promote subsequent bacterial growth.

## PART 2 - PRODUCTS

### 2.1 FILTRATION MEDIA

- A. If air handlers are used during construction, filtration media must be installed at the ends of return air ductwork, at return air grilles in an open plenum or chase, and at return air openings at mechanical rooms housing the air handling units. The filtration media shall have a Minimum Efficiency Reporting Value (MERV) of 8, as determined by ASHRAE 52.2-1999.
- B. Replace all filtration media immediately prior to occupancy, unless the system is configured to filter only outside air, the filters do not need to be replaced.
- C. Building flush-outs, as defined in article 3.3 below, shall be conducted with new MERV 13 filtration media installed at the air handling units used for the flush-outs. Upon completion of the flush-outs, the Construction Manager shall inspect the condition of the MERV 13 filters and replace any that have collected significant dust and particulates through the flush-out process.

## PART 3 - EXECUTION

### 3.1 CONSTRUCTION IAQ MANAGEMENT PLAN – DETAILED REQUIREMENTS

- A. Compliance with SMACNA Guidelines:
  - 1. Chapter 3 of the referenced "IAQ Guidelines for Occupied Buildings under Construction"

outlines IAQ measures in five categories as listed below. The Construction IAQ Management Plan shall be organized in accordance with the SMACNA format, and shall address measures to be implemented by the Contractor and/or Subcontractors in each of the five categories, including subsections. All Subsections shall be listed in the Plan; items that are not applicable for this project should be listed as such by the Contractor.

1. HVAC Protection
  - Return Side
  - Central Filtration
  - Supply Side
  - Duct Cleaning
2. Source Control
  - Product Substitution
  - Modifying Equipment Operation
  - Changing Work Practices
  - Local Exhaust
  - Air Cleaning
  - Cover or Seal
3. Pathway Interruption
  - Depressurize Work Area
  - Pressurize Occupied Space
  - Erect Barriers to Contain Construction Areas
  - Relocate Pollutant Sources
  - Temporarily Seal the Building
4. Housekeeping
  - Routine Jobsite Cleaning
  - Protection of Stored Materials
  - Protection of Materials During and After Installation
  - Scheduling
  - Airing-Out of New Materials
3. Scheduling
  - Sequencing of Finish Applications
  - Proper Curing of Concrete before Covering
  - Installation During Unoccupied Periods
  - Avoidance of Building Occupancy While Pollutants Are Present

B. Protection of Materials from Moisture Damage:

1. As part of the Housekeeping section of the Construction IAQ Management Plan, measures to prevent installed materials or material stored on-site from moisture damage shall be described. This section should also describe measures to be taken if moisture damage does occur to absorptive materials during the course of construction.

C. Installation and Replacement of Filtration Media:

1. Under the HVAC Protection section of the Construction IAQ Management Plan, a description of the filtration media in all ventilation equipment shall be provided. The

description shall include replacement criteria for filtration media during construction and confirmation of filtration media replacement for all equipment immediately prior to occupancy. Filtration media shall meet the requirements of article 2.01 of this Section.

D. Sequence of Finish Installation for Materials:

1. Where feasible, absorptive materials (referred to herein as "Type 2" products) shall be installed after the installation of materials or finishes which have high short-term emissions of VOC's, formaldehyde, particulates, or other air-borne compounds (referred to herein as "Type 1" products).
  1. Type 2 materials include, but are not limited to: carpets; acoustical ceiling panels; fabric wall coverings; insulations (exposed to the airstream); upholstered furnishings; and other woven, fibrous or porous materials.
  2. Type 1 materials include, but are not limited to: adhesives, sealants and glazing compounds (specifically those with petrochemical vehicles or carriers); paints, wood preservatives and finishes; control and /or expansion joint fillers; hard finishes requiring adhesive installation; gypsum board (with associated finish processes and products); and composite or engineered wood products with formaldehyde binders.
2. The Contractor shall develop a separate sequencing plan that identifies possible opportunities to meet the above-stated goals for the project. The plan shall be submitted to the Contracting Officer in accordance with the Submittal Requirements of this specification.

### 3.2 IMPLEMENTATION AND COORDINATION

- A. The Contractor shall be responsible for implementation of the Construction IAQ Management Plan, and for the coordination of the Plan with all affected trades. The Contractor shall designate one individual as their Construction IAQ Representative, who will be responsible for communicating the progress of the Plan with the Contracting Officer on regular basis, and for assembling the required documentation. The Contractor shall include provisions in the Construction IAQ Management Plan for addressing conditions in the field that do not adhere to the Plan, including provisions to implement a stop work order, or to rectify non-compliant conditions.
- B. Sub-contractors shall be responsible for the implementation of specific control measures, as specified in the Construction IAQ Management Plan. Sub-contractors shall coordinate their responsibilities through the Contractor's designated Construction IAQ Representative.

### 3.3 BUILDING FLUSH-OUTS AND PRE-OCCUPANCY INDOOR AIR QUALITY TESTING

- A. All occupied spaces the building must undergo either a Flush-out or Air Quality Testing. Contractor shall submit a written request to the Contracting Officer for approval prior to conducting the Building Flush Out and/or Air Quality Testing. Any such requests shall not be submitted until all interior finishes have been installed. A combination of the two strategies can be used in the same building. The Contractor shall provide a:
  1. Flush-out:
    1. A total of 14,000 cubic feet of outside air per square foot of floor area must be supplied to all occupied spaces of the buildings. A total of 3,500 cubic feet of outside air per square foot of floor area must be supplied to all spaces prior to

- occupancy.
2. A minimum of 0.30 cfm/sf of outside air, or the design minimum outside air rate, must be provided during the flush-out. Higher amounts of outside air may be provided to reduce the duration of the flush-out period.
  3. During the flush-out, an internal temperature of at least 60 degrees F must be maintained, and the relative humidity can be no higher than 60%.
  4. If a space is occupied prior to the completion of the flush-out (but after the initial 3,500 cubic feet of outside air per square foot of floor area is supplied), the flush-out ventilation rates shall begin at least three hours prior to occupancy each day, until the flush-out of the space is complete.
2. Air Quality Testing:
1. Conduct baseline IAQ testing using the protocols consistent with the United States Environmental Protection Agency, "Compendium of Methods for the Determination of Air Pollutants in Indoor Air". Demonstrate that the following contaminant maximum concentrations are not exceeded:  
Formaldehyde: 27 parts per billion
    1. Particulates (PM10): 50 micrograms per cubic meter
    2. Total Volatile Organic Compounds (TVOC): 500 micrograms per cubic meter
    3. 4-Phenylcyclohexene (4-PCH): 6.5 micrograms per cubic meter\*
    4. Carbon Monoxide (CO): 9 parts per million and no greater than 2 parts per million above outdoor levels

\* This test is only required if carpets and fabrics with styrene butadiene rubber (SBR) latex backing material are installed.
  2. For each sampling point where the maximum concentration limits are exceeded conduct additional flush-out with outside air and retest the specific parameter(s) exceeded to indicate the requirements are achieved. Repeat procedure until all requirements have been met. When retesting non-complying building areas, take samples from the same locations as in the first test.
  3. The air sample testing shall be conducted as follows:
    1. All measurements shall be conducted prior to occupancy, but during normal occupied hours, and with the building ventilation system starting at the normal daily start time and operated at the minimum outside air flow rate for the occupied mode throughout the duration of the air testing.
    2. The building shall have all interior finishes installed, including but not limited to millwork, doors, paint, carpet and acoustic tiles. Non-fixed furnishings such as workstations and partitions are encouraged, but not required, to be in place for the testing.
    3. The number of sampling locations will vary depending upon the size of the building and number of ventilation systems. For each portion of the building served by a separate ventilation system, the number of sampling points shall not be less than one per 25,000 sq.ft., or for each contiguous floor area, whichever is larger, and include areas with the least ventilation and greatest presumed source strength.
    4. Air samples shall be collected between 3 feet and 6 feet from the floor to represent the breathing zone of occupants, and over a minimum 4-hour period.
  4. The flush-out and/or air quality testing shall be documented in accordance with part 1.6 Submittals of this Section.



**END OF SECTION 01 57 19**

## SECTION 01 59 50 - SAFETY AND HEALTH

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including Federal Acquisition Regulations (FAR) and General Services Administration Acquisition Regulations (GSAR) contract clauses, General and Supplementary Conditions, and Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. References: In addition to publications referenced in the Construction Contract Clauses, the following Code of Federal Regulations (CFR), publications apply to conduct of the work. . State and local safety and health regulations that apply are not cited herein. Current editions at the date of the agreement apply. The more stringent requirements apply.
  - 1. 29 CFR, Part 1910: Occupational Safety and Health Administration (OSHA) General Industry and Health Standards.
  - 2. 29 CFR, Part 1926 " Safety and Health Regulations for Construction"
  - 3. 40 CFR 260, "Hazardous Waste Management System"
  - 4. 40 CFR 261, "Identification and Listing of Hazardous Waste."
  - 5. 40 CFR, Part 761, EPA Polychlorinated Biphenyls (PCBs), Manufacturing, Processing, Distribution in Commerce and Use Prohibitions.
  - 6. National Fire Protection Association (NFPA) 70E Electrical Safety Requirements for Workplace Safety
  - 7. U.S. Army Corps of Engineers (USCOE) Safety and Health Requirements Manual, EM 385-1-1, current edition.
  - 8. Federal Standard: Fed. Std. 313A, Material Safety Data Sheets, Preparation and the Submission of.
- B. Acquisition of Publications:
  - 1. Codes of Federal Regulations (CFR) and the U.S. Army Corps of Engineers EM 385-1-1 may be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.
  - 2. NFPA publications may be purchased from the National Fire Protection Association, 1 Batterymarch Park, P.O. Box 9101, Quincy, MA 02269-9101.

#### 1.3 SAFETY MEETINGS

- A. Prior to commencing construction, representatives of the Contractor, including the principal on-site project representative and one or more safety representatives, shall meet with designated representatives of the government for the purpose of reviewing the Contract's safety and health requirements. The safety and health program shall be reviewed, and specific implementation of safety and health provisions pertinent to the Work shall be discussed.
- B. Safety Meetings shall be monthly. Contractor shall prepare meeting minutes for each meeting and load into ePM. Contractor's project manager, safety officer, project superintendent and any other

supervisors shall be required to attend these meetings with the Government and its designated on-site representatives.

#### 1.4 SAFETY AND HEALTH PROGRAM

- A. Contractor Responsibility: The Contractor shall assume full responsibility and liability for compliance with applicable codes, standards and regulations pertaining to the health and safety of personnel during execution of the Work, and shall hold the Government harmless for any action on the Contractor's part, or that of the Contractor's employees or subcontractors, that results in illness, injury or death.
- B. Site Safety and Health Officer: A trained and experienced individual shall be delegated in writing as the Site Safety and Health Officer (SSHO). Projects over \$ 10 million require a full time on-site SSHO. The SSHO shall be responsible for the development, implementation, oversight and enforcement of the Contractor's Accident Prevention Plan (APP) on-site, which shall address all activities for which the Contractor is responsible. The Contractor may appoint as many individuals as he or she deems appropriate to accomplish the provisions of this section. The SSHO shall typically remain on-site full-time during activities conducted under this contract. The SSHO may be an individual with other responsibilities, already identified to be on site and who has the authority and appropriate knowledge to oversee and act on the provisions of this section.
- C. First Aid and Emergency Response Requirements: The Contractor shall provide for emergency first aid equipment. Additionally, a 20-pound ABC-rated fire extinguisher shall be maintained on-site as well as absorbent material of sufficient quantity to collect any spill which might occur during this project. A listing of emergency phone numbers and points of contact for fire, hospital, police, ambulance, and other necessary contacts shall be posted at the Contractor's site.
- D. Contractor shall provide for site visitors' Personal Protective Equipment (PPE) per OSHA for use during their visits. Provide a minimum of 10 sets with replacements for items not suitable for reuse.

#### 1.5 SUBMITTALS

- A. The Contractor shall submit for approval in ePM copies of the project safety and health programs, as applicable to the work scope or required as a result of the safety meeting.
  - 1. Occupational Noise Exposure.
  - 2. Fall Protection.
  - 3. Personal Protective Equipment.
  - 4. Control of Hazardous Energy.
  - 5. Electrical Safety Related Work Practices.
  - 6. Lead.
  - 7. Asbestos.
  - 8. Polychlorinated Biphenyls (PCBs)
  - 9. Respirator Protection.
  - 10. Confined spaces.
- B. Contractor's Safety Plan: In addition to specific safety and health programs applicable to the project, Contractor shall submit firm's general safety plan at the pre-construction conference listing emergency procedures and contact persons with home addresses and telephone numbers. The Safety Plan shall be posted on the ePM project site.

- C. Permits: If hazardous materials are disposed of off-site, submit in ePM copies of shipping manifests and permits from applicable federal, state or local authorities and disposal facilities, and submit certificates that the material has been disposed of in accordance with regulations. Contractor shall be responsible for obtaining the Environmental Protection Agency's (EPA) Hazardous Waste Generator ID Number for disposal of contractor generated hazardous waste; submit in ePM with fourteen (14) days of receiving Generator ID Number from the EPA.
- D. Accident Prevention Plan (APP): Submit an electronic copy of the APP in ePM.
- E. Accident Reporting: Submit an electronic copy of each accident report in ePM that the Contractor or Subcontractors submits to their insurance carriers, within seven calendar days after the date of the accident.
- F. Emergency call down tree: Include an emergency call down tree containing contact info for all team members as part of the Contractor Safety Plan.
- G. If the contractor brings hazardous materials onto the property, the contractor shall submit a hazardous material management plan which shall, at a minimum, identify and provide the Material Safety Data Sheet (MSDS) for each material, describe proper handling and storage procedures for each material, and describe the contractor's plan for responding to a spill or release of the material(s).

## PART 2 - PRODUCTS

### 2.1 PERSONAL PROTECTIVE EQUIPMENT

- A. Special facilities, devices, equipment and similar items used by the Contractor in execution of the Work shall comply with the applicable regulations.

## PART 3 - EXECUTION

### 3.1 HAZARDOUS MATERIALS AND CONDITIONS

- A. The Contractor shall advise GSA of any hazardous material and/or hazardous condition encountered during execution of the work. GSA shall determine if the Contractor must perform additional tests and if the work for the particular material or condition shall cease. Work shall recommence at the direction of GSA. The SSHO shall take measures to protect personnel until GSA has rendered its decision.

### 3.2 EMERGENCY SUSPENSION OF WORK

- A. When the Contractor is notified by GSA of non-compliance with the safety or health provisions of the Contract, the Contractor shall immediately cease work in the subject area unless otherwise instructed, and correct the unsafe or unhealthy condition.
  - 1. If the Contractor fails to comply promptly, all or part of the Work will be stopped by notice from GSA.

2. When GSA determines that satisfactory corrective action has been taken by the Contractor, work shall resume.
3. The Contractor shall not be allowed any extension of time or compensation for damages in connection with a work stoppage for an unsafe or unhealthy condition.

### 3.3 PROTECTION OF PERSONNEL

- A. The Contract shall take necessary precautions to prevent injury to the public, occupants, and work forces. The public and occupants includes all persons not employed by the Contractor or a subcontractor.
- B. The work area shall be fenced, barricaded or otherwise blocked off from the public or occupants to prevent unauthorized entry into the work area. Control by authorized personnel shall be done where passage through is necessary for the work.
  1. Provide traffic barricades and traffic control signage where construction activities occur in vehicular areas.
  2. Corridors, aisles, stairways, doors and exit ways shall not be obstructed or used in a manner to encroach upon routes of ingress or egress utilized by the public or occupants, or to present an unsafe or unhealthy condition to the public or occupants.
  3. Store, position and use equipment, tools, materials, in a manner that does not present a hazard to the public or occupants.
  4. Store and transport refuse and debris in a manner to prevent unsafe and unhealthy conditions for the public and occupants. Cover refuse containers, and remove refuse on a frequent regular basis acceptable to GSA. Use tarpaulins or other means to prevent loose transported materials from dropping from trucks.

### 3.4 ENVIRONMENTAL PROTECTION

- A. Dispose of solid, liquid and gaseous contaminants in accordance with applicable federal, state, and local codes, laws, ordinances and regulations.
- B. Comply with applicable federal, state and local noise control laws, ordinances and regulations, including but not limited to 29 CFR 1910.95 and 29 CFR 1926.52.

**END OF SECTION 01 59 50**

## SECTION 01 60 00 - PRODUCT REQUIREMENTS

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including Federal Acquisition Regulations (FAR) and General Services Administration Acquisition Regulations (GSAR) contract clauses, General and Supplementary Conditions, and Division 01 Specification Sections, apply to this Section.

#### 1.2 BUY AMERICAN REQUIREMENTS

- A. Additional information on the Buy American requirements can be found in FAR Subpart 25.2 at the Federal Acquisition Regulation website and Section IV of the Contract Agreement.

#### 1.3 SUMMARY

- A. This Section includes administrative and procedural requirements governing the Contractor's selection of products for use in the Project, including manufacturers' standard warranties on products and special warranties.
- B. The following definitions are not intended to change the meaning of other terms used in the Contract Documents, such as "specialties," "systems," "structure," "finishes," "accessories," and similar terms that are self-explanatory and have well-recognized meanings in the construction industry.
  - 1. "Products" means items purchased for incorporation in the Work, whether purchased for the Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and other terms of similar intent.
  - 2. "Materials" means products substantially shaped, cut, worked, mixed, finished, refined or otherwise fabricated, processed, or installed to form a part of the Work.
  - 3. "Equipment" means products with operational parts, whether motorized or manually operated, and products that require service connections, such as wiring or piping.
- C. See Division 01 Section "Substitution Procedures" for requests for substitutions.
- D. Warranties: Standard, and special warranties required by the individual sections of the Specifications shall provide guarantees in terms of time limits or rights of the Government in addition to those contained in the Construction Contract Clauses.
  - 1. Standard product warranties shall be preprinted written warranties published by individual manufacturers for particular products, and shall be specifically endorsed to the Government by the manufacturer.
  - 2. Special warranties shall be specifically written to incorporate particular requirements of the Contract Documents, and shall be endorsed to the Government by the entities responsible for the work, as stated in the individual section.

#### 1.4 SUBMITTALS

- A. Submittals: See Division 01 Section "Submittal Procedures."
- B. Substitutions: See Division 01 Section "Substitution Procedures."
- C. Submit written warranties to the Government prior to the date for Project Completion, unless an earlier time of submission is specified elsewhere in the Contract Documents or requested by the Government. When a designated portion of the Work is completed and occupied or used by the Government, by a separate agreement with the Contractor during the construction period, submit properly executed warranties within 15 days after completion of that designated portion of the Work. Identify and clearly label on the product the effective start time and end time for each warranty.
  - 1. When the Contract Documents require the Contractor to execute a special warranty, provide a written document that contains the appropriate terms and identification, executed by the required parties.
  - 2. See technical Specification divisions for other warranty language.

## 1.5 QUALITY CONTROL

- A. Source Limitations: To the fullest extent possible, provide products of the same kind from a single source. Equipment of the same function shall be manufactured by the same entity, unless otherwise indicated.
- B. Compatibility of Options: When the Contractor is given the option of selecting between 2 or more products for use on the Project, the product selected shall be compatible with products previously selected.
- C. Labels and nameplates: Except for required labels and operating data, do not attach or imprint manufacturers' or producers' nameplates or trademarks on surfaces of products that will be exposed to view in occupied spaces or on the exterior.
  - 1. Labels: Locate required product labels and stamps on concealed surfaces or, where required for observation after installation, on accessible surfaces that are not conspicuous. Labels indicating compliance with recognized organizations require confirmation by submitted documents.
  - 2. Equipment Nameplates: Provide a permanent nameplate on each item of service-connected or power-operated equipment. Locate nameplate on an easily accessible surface that is inconspicuous in occupied spaces. The nameplate shall contain the following information:
    - a. Name of product manufacturer.
    - b. Model and serial numbers.
    - c. Operating data such as capacity, speed and ratings.
    - d. Name and phone number of Installer.
  - 3. Protection: Labels and nameplates shall be protected from defacement and other damage during the remainder of the Work.

## 1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Coordinate with Division 01 Section "Temporary Facilities and Controls."
- B. Deliver, store and handle products according to the manufacturer's recommendations, using means and methods that will prevent damage, deterioration and loss, including theft.

1. Schedule product delivery to minimize long-term storage at the site and to prevent overcrowding of construction spaces.
2. Coordinate delivery with installation time to provide minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft and other losses.
3. Deliver products to the site in an undamaged condition, in the manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting and installing.
4. Inspect products upon delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected. Coordinate inspection with Government, GSA COR or designated representative (i.e., Bldg. Manager, CM, etc.).
5. Store products at the site in a manner that will facilitate inspection and measurement of quantity or counting of units.
6. Store heavy materials away from the Project structure in a manner that will not endanger the supporting construction.
7. Store products subject to damage by the elements above ground, under cover in a weather-tight enclosure, with ventilation adequate to prevent condensation. Maintain temperature and humidity within range required by manufacturer's instructions.

## PART 2 - PRODUCTS

### 2.1 PRODUCT COMPLIANCE AND REQUIREMENTS

- A. Provide products complete with accessories, trim, finish, safety guards, devices and other items needed for a complete installation and the intended use and effect. Where specified and available, provide standard products of types that have been produced and used successfully in similar situations on other projects.
- B. Product Selection Procedures: The Contract Documents, including the Construction Contract Clauses, govern product selection. Requirements for product selection include the following:
  1. Where the Specifications list manufacturers' names or product designations, the Contractor may provide any product that complies with the requirements, subject to the following conditions:
    - a. Available Manufacturers: Where a Specification paragraph or subparagraph titled "Available Manufacturers" lists a minimum of three manufacturers' names, provide a compliant product by one of the manufacturers named or by another manufacturer.
    - b. Available Products: Where a Specification paragraph or subparagraph titled "Available Products" lists a minimum of three product designations, provide one of the products designated or another compliant product.
    - c. Basis-of-Design: Where a Specification paragraph or subparagraph titled "Basis-of-Design" includes a product designation, provide the product designated, or request a Substitution of a compliant product by a named or other manufacturer.
  2. Descriptive Requirements: Where Specifications describe a product or assembly, listing the characteristics required, provide a product or assembly that provides the characteristics and otherwise complies with Contract requirements.
  3. Performance Requirements: Where Specifications require compliance with performance requirements, provide products that comply with these requirements and are recommended by the manufacturer for the application indicated. Manufacturer's recommendations may be contained in published product literature or by the manufacturer's certification of performance.



4. Prescriptive Requirements: Where Specifications require products that are produced using specified ingredients and components, including specific requirements for mixing, fabricating, curing, finishing, testing and similar operations in the manufacturing process, provide products produced in accordance with the prescriptive requirements that otherwise comply with Contract requirements.
  5. Codes, Standards and Regulations: Where Specifications require compliance with an imposed code, standard or regulation, select a product that complies with these requirements.
  6. Visual Matching: Where Specifications require matching an established Sample, the Government's decision will be final on whether a proposed product matches satisfactorily. Where no product available within the specified category matches satisfactorily and complies with other specified requirements, comply with provisions concerning "substitutions" for selections of a matching product in another product category.
  7. Visual Selection: Where specified product requirements include the phrase "as selected from manufacturer's standard colors, patterns, textures" or a similar phrase, select a product and manufacturer that complies with other specified requirements. The Government will select the color, pattern and texture from the manufacturer's product line.
- C. The Contractor's submittal and the Government's acceptance of Shop Drawings, Product Data, or Samples for construction activities not complying with Contract Documents do not constitute an acceptable or valid request for substitution, nor do they constitute approval.

## 2.2 WARRANTY REQUIREMENTS

- A. Related Damages and Losses: When correcting failed or damaged warranted construction, remove and replace construction that has been damaged as a result of such failure or must be removed and replaced to provide access for correction of warranted construction.
- B. Reinstatement of Warranty: When Work covered by a warranty has failed and been corrected by replacement or rebuilding, reinstate the warranty by written endorsement. The reinstated warranty shall be equal to the original warranty with an adjustment for depreciation.
- C. Replacement Cost: Upon determination that Work covered by a warranty has failed, replace or rebuild the Work to an acceptable condition complying with requirements of the Contract Documents. The Contractor is responsible for the cost of replacing or rebuilding defective Work.
- D. Rejection of Warranties: The Government reserves the right to reject warranties and to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
- E. Where the Contract Documents require a special warranty, or similar commitment for the Work or part of the Work, the Government reserves the right to refuse to accept the Work until the Contractor presents evidence that entities required to countersign such commitments are willing to do so.

## PART 3 - EXECUTION (Not Applicable)

## END OF SECTION 01 60 00



## SECTION 01 70 00 - EXECUTION REQUIREMENTS

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including Federal Acquisition Regulations (FAR) and General Services Administration Acquisition Regulations (GSAR) contract clauses, General and Supplementary Conditions, and Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. This section includes certain general procedural requirements governing the Contractor's execution of the Work, including, but not limited to laying out the work, general installation of products, correction of defective work, and cleaning.
- B. Substitutions: Changes in methods of construction required by the Contract Documents proposed by the Contractor after award of the Contract shall comply with the procedures and conditions specified for Substitutions in the Construction Contract Clauses, Division 01 Section "Product Requirements" and as further coordinated with Division 01 Section "Substitution Procedures."

#### 1.3 SUBMITTALS

- A. Field Correction Requests: Immediately upon discovery of the need to deviate from requirements of the Contract Documents, submit a field correction request to GSA for review. Include a detailed description of the problem encountered, together with recommended changes and detailing the reasons for deviating from the Contract Documents.
- B. Manufacturer's Field Services Submissions: Where product manufacturers are required by the individual sections of the Specifications to provide qualified personnel to observe conditions of project conditions, installation or workmanship, start up or adjustment of equipment, tests or other activities, and to initiate instructions when necessary, the following shall be submitted to GSA:
  - 1. Qualifications: For approval, submit qualifications of observer at least 30 calendar days in advance of scheduled activities.
  - 2. Report: For information, submit report of activities and findings within 15 calendar days after the successful execution of the specified work. Include logs and other documented data where applicable.
- C. Landfill Receipts: Submit copy of receipts issued by a landfill facility, licensed to accept hazardous materials, for hazardous and other waste disposal. Also submit electronic copies through ePM of receipts for any items recycled or salvaged.

#### 1.4 QUALITY CONTROL

- A. Workmanship Standards: Initiate and maintain procedures to ensure personnel performing the work are skilled and knowledgeable in the methods and craftsmanship needed to produce the required levels of workmanship. Remove and replace work that does not comply with

workmanship specified and standards recognized in the construction industry for the applications indicated. Remove and replace work damaged or deteriorated by faulty workmanship or replacement of other work.

1. **Manufacturer's Instructions:** Where installations include manufactured products, comply with manufacturer's applicable installation instructions and recommendations to the extent that those instructions and recommendations are more explicit or stringent than requirements contained in the Contract Documents.
2. **Specialists:** Where the individual sections of the specifications require specialists to perform the work, comply with the requirements specified in the Construction Contract Clauses. The assignment of a specialist shall not relieve the Contractor from complying with applicable regulations, union jurisdictional settlements or similar conventions, and the final responsibility for fulfillment of the entire requirements remains with the Contractor.
3. **Minimum Quality and Quantity:** The quality level or quantity shown or specified shall be the minimum required for the work. Except as otherwise indicated, the actual work shall comply exactly with that minimum or may be superior to that minimum within limits acceptable to GSA. Specified numeric values are either minimums or maximums as indicated or as appropriate for the context of the requirements.
4. **Availability of Tradespersons and Manufacturer's Field Services Representatives:** At each progress or coordination meeting, review availability of tradespersons, qualified manufacturers' representatives required in the specifications, and projected needs to accomplish work as scheduled. Require each entity employing personnel to report on events which might affect progress of work. Where possible, consider alternatives and take actions to avoid disputes and delays.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 LAYING OUT THE WORK

- A. Layout the Work using accepted surveying practices.
  1. Establish benchmarks and markers to set lines and levels at each story of construction and elsewhere as needed to locate each element of the Project.
  2. Establish dimensions within tolerances indicated.
  3. Inform installers of lines and levels to which they must conform.
  4. Check the location, level and plumb of every major element as the work progresses.
  5. Notify GSA when deviations from required lines and levels exceed allowable tolerances.
  6. Establish limits of use of Project site.
  7. Close site surveys with an error of closure equal to or less than the standard established by authorities having jurisdiction.

3.2 EXAMINATION

- A. Examine applicable substrates and conditions under which the Work will be performed before starting construction operations.

- B. If unsafe or otherwise unsatisfactory conditions are encountered take corrective action before proceeding. Provide GSA with a written report documenting the conditions with the corrective actions taken.

### 3.3 PREPARATION

- A. Take field measurements as required to fit the Work properly. Re-check measurements before installing each product. Confirm dimensional requirements of the contract documents can be met.
- B. Verify space requirements of items shown diagrammatically on Drawings.

### 3.4 INSTALLATION

- A. Locate the Work and components of the Work accurately.
  - 1. Make vertical work plumb and horizontal work level.
  - 2. Where space is limited, install components to maximize space available for maintenance and to maximize ease of removal for replacement.
  - 3. Conceal pipes, ducts, and wiring in finished areas unless construction documents have designated otherwise.
  - 4. Maintain minimum headroom clearance of 96 inches (2440 mm) in occupied spaces and 90 inches (2300 mm) in unoccupied spaces.
- B. Install products at the time and under conditions that will produce satisfactory results.
  - 1. Maintain temperature, humidity and other weather controls for best performance.
  - 2. Isolate units of non-compatible work to prevent deterioration.
- C. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.
- D. Conduct construction operations so that no part of the Work is subjected to damaging operations, or loading in excess of that structurally designed for the occupancy.
- E. Tools and Equipment: Do not use tools or equipment that produce harmful or unacceptable levels of noise.
- F. Odors and Fumes: To the greatest extent practicable, do not use products that produce harmful or noticeable odors or fumes. If necessary to use such products, coordinate ventilation requirements to produce the ambient condition required for the work and to minimize energy consumption, and to protect personnel from fumes and other harmful effects.
- G. Anchors and Fasteners: Provide anchors and fasteners that will withstand stresses, vibration and physical distortion. Anchor each component securely in place, accurately located and aligned with other Work.
  - 1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by GSA.
  - 2. Allow for building movement, including thermal expansion and contraction.
- H. Joints: Make like joints of uniform width within contiguous surfaces. Where joint locations in exposed work are not indicated, arrange joints for a uniform and balanced visual effect.
- I. Adjust operating components for proper operation

### 3.5 PROTECTION OF INSTALLED CONSTRUCTION

- A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.
- B. Comply with manufacturer's written instructions for temperature and relative humidity.

### 3.6 CORRECTION OF INSTALLED DEFECTIVE WORK

- A. Repair or remove and replace defective construction. Restore damaged substrates and finishes.
- B. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and proper adjustment of operating equipment.
- C. Restore permanent facilities used during construction to their specified condition.
- D. Remove and replace damaged surfaces that are exposed to view if the surfaces cannot be repaired without visible evidence of repair.
- E. Repair components that do not operate properly. Remove and replace operating components that cannot be repaired to operate properly.
- F. Remove and replace chipped, scratched or broken surfaces.

### 3.7 CLEANING

- A. Maintain the project work areas free of waste material and debris. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
- B. Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the work.
  - 1. Remove liquid spills promptly.
  - 2. Where dust would impair proper execution of the work, broom- or vacuum-clean the entire work area.
  - 3. Separate containers of hazardous materials from other waste, and mark containers to identify. Legally dispose of all waste in timely fashion.
- C. Keep installed work clean. Clean installed surfaces in accordance with the recommendations of the manufacturer or fabricator of the product installed, using only the cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and will not damage exposed surfaces.
- D. Remove debris from concealed spaces prior to enclosing.
- E. Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at the time of project completion.

### 3.8 PROTECTION

- A. Protect installed work from soiling and damage.

- B. Protective Coverings: Provide appropriate protective coverings for work that might be damaged by subsequent operations. Maintain protective coverings in place until project completion.

**END OF SECTION 01 70 00**

## SECTION 01 73 10 - CUTTING AND PATCHING

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including Federal Acquisition Regulations (FAR) and General Services Administration Acquisition Regulations (GSAR) contract clauses, General and Supplementary Conditions, and Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. This section includes procedural requirements for cutting and patching in existing work.
- B. Definition: Cutting and patching includes cutting into existing construction to provide for the installation or performance of other work and subsequent fitting and repair required to restore surfaces to their original condition. Drilling holes for fasteners and similar operations are not "cutting and patching".
- C. Refer to other sections for other requirements and limitations applicable to cutting and patching individual parts of the Work.
- D. Coordinate cutting and patching with demolition requirements as specified in Division 01 Section "Selective Demolition."
- E. Coordinate requirements specified herein with Division 01 Section "Construction Waste Management & Disposal."

#### 1.3 SUBMITTALS

- A. Cutting and Patching Plan: In accordance with Division 01 Section "Submittal Procedures," submit a proposal to GSA's representative, describing procedures at least 14 calendar days in advance of the time cutting and patching will initially be performed.
  - 1. Include the following information, as applicable:
    - a. Description of the extent of cutting and patching required. Show how it will be performed and indicate why it cannot be avoided.
    - b. Description of the anticipated results in terms of changes to existing construction. Include changes to structural elements and operating components as well as changes in appearance and other significant visual elements.
    - c. List of products to be used and entities that will perform work.
    - d. Dates and hours of operation when cutting and patching will be performed.
    - e. List utilities that will be disturbed or otherwise be affected by work, including those that will be relocated and those that will be out-of-service temporarily. Indicate how long utility service will be disrupted.
    - f. Compatibility and cohesion characteristics of patching compounds with adjacent materials.



- g. Details and engineering calculations showing integration of reinforcement with the original structure, where cutting and patching involve adding reinforcement to structural elements.
  - h. Temporary protection of existing structures, surfaces, finishes, equipment, etc. to remain in place during construction.
- B. Approval by GSA to proceed with cutting and patching does not waive the right to later require complete removal and replacement of unsatisfactory work.

#### 1.4 QUALITY CONTROL

- A. Requirements for Structural Work: Do not cut and patch structural elements in a manner that would change their load-carrying capacity or load-deflection ratio.
  - 1. The cutting and patching plan shall include but not be necessarily be limited to work required at the following structural elements:
    - a. Bearing and retaining walls.
    - b. Structural concrete.
    - c. Structural steel.
    - d. Lintels.
    - e. Structural decking.
    - f. Stair systems.
    - g. Miscellaneous structural metals.
    - h. Exterior curtain-wall construction.
    - i. Equipment supports.
    - j. Piping, ductwork, vessels, and equipment.
    - k. Structural systems of other construction.
- B. Operational Limitations: Do not cut and patch operating elements, safety related systems, or related components in a manner that would result in reducing their capacity to perform as intended, or that would result in increased maintenance or decreased operational life or safety.
  - 1. The cutting and patching plan shall include but not be limited to work required on the following operating elements or safety related systems:
    - a. Primary operational systems and equipment.
    - b. Air or smoke barriers.
    - c. Water, moisture, or vapor barriers.
    - d. Membranes and flashings.
    - e. Fire protection systems.
    - f. Noise and vibration control elements and systems.
    - g. Control systems.
    - h. Communication systems.
    - i. Conveying systems.
    - j. Electrical wiring systems.
    - k. Operating systems of other construction.
    - l. Intrusion detection systems.
    - m. Automated access control systems.
    - n. Internet, data and telephone lines.
- C. Visual Requirements: Do not cut and patch construction exposed on the exterior or in occupied spaces in a manner that would, in GSA's opinion, reduce the building's aesthetic qualities. Do not

cut and patch construction in a manner that would result in visual evidence of cutting and patching. Remove and replace construction that is cut and patched in a visually unsatisfactory manner.

1. Retain the original installer or fabricator to cut and patch exposed work if the original installer or fabricator is identified in the Contract Documents or is known to the Contractor and is available for the work.
2. If it is not possible to engage the original installer or fabricator, engage a Specialist who is specifically experienced in the work.
3. The cutting and patching plan shall include but not be limited to work required at the following visual elements:
  - a. Processed concrete finishes.
  - b. Stonework and stone masonry.
  - c. Ornamental metal.
  - d. Matched-veneer woodwork.
  - e. Preformed metal panels.
  - f. Fire-stopping.
  - g. Window wall system.
  - h. Stucco and ornamental plaster.
  - i. Acoustical ceilings.
  - j. Terrazzo.
  - k. Finished wood flooring.
  - l. Fluid-applied flooring.
  - m. Carpeting.
  - n. Aggregate wall coating.
  - o. Wall covering.
  - p. Mechanical system enclosures, cabinets and covers.

## 1.5 EXISTING WARRANTIES

- A. Replace, patch, and repair material and surfaces cut or damaged by methods and with materials in such a manner as not to void any existing warranties.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

- A. Use materials identical to existing materials to the maximum extent available.
- B. For exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible.
- C. Use materials whose installed performance will equal or surpass that of existing materials.
- D. Materials and/or products used in historic buildings must be approved by GSA Historic Preservation Staff.

## PART 3 - EXECUTION

### 3.1 INSPECTION

- A. Before cutting, examine surfaces to be cut and patched and conditions under which cutting and patching is to be performed. If unsafe or unsatisfactory conditions are encountered, take corrective action before proceeding.
- B. Before proceeding with cutting and patching involving two or more trades, meet at the Project site with the entities providing or affected by the cutting and patching. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.
- C. Before cutting areas of high historic integrity (i.e. zones 1 & 2) as noted on the Historic Building Preservation Plan, these must be reviewed and approved by GSA Historic Preservation Staff.

### 3.2 PREPARATION

- A. Provide temporary support of work to be cut.
- B. Protect existing conditions during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of the Project that might be exposed during cutting and patching operations.
- C. Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.
- D. Bypass in-service existing pipe, conduit, or ductwork scheduled to be removed or relocated before cutting.

### 3.3 PERFORMANCE

- A. Employ skilled workmen to perform cutting and patching. Proceed with cutting and patching at the earliest possible time and complete without delay. Any adverse noise or odor producing work must be performed in accordance with Division 01 Section "Work Restrictions." Cutting: Cut existing construction using methods least likely to damage elements retained and adjoining construction. Where possible, review proposed procedures with the original installer and comply with the original installer's recommendations.
  - 1. In general, use hand or small power tools designed for sawing or grinding, not for hammering and chopping.
  - 2. Cut holes and slots as small as possible, neatly to size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
  - 3. To avoid marring existing finished surfaces, cut or drill from the exposed or finished side into concealed surfaces.
  - 4. Cut through concrete and masonry using silicon carbide or harder tipped tools.
  - 5. Comply with requirements of applicable specification sections where cutting and patching requires excavating and backfilling.
  - 6. After utility services are bypassed, cut-off pipe or conduit in walls or partitions to be removed. Cap, valve or plug and seal the remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after by-passing and cutting.
- B. Patching: Patch with durable seams that are as invisible as possible. Comply with specified tolerances.
  - 1. Inspect and test patched areas to demonstrate integrity of the installation.

2. Restore exposed finishes of patched areas and extend finish restoration into adjoining construction in a manner that will eliminate evidence of patching and refinishing.
  3. Where removed walls or partitions extends one finished area into another finished area, patch and repair floor and wall surfaces to provide an even surface of uniform color and appearance. Remove existing floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.
  4. Where patching occurs in a smooth painted surface, extend final paint coat over entire unbroken surface that contains the patch.
  5. Patch, repair or re-hang existing ceilings as necessary to provide an even-plane surface of uniform appearance.
- C. Perform cutting and patching work if listed in Division 01 Section "Work Restrictions" to be performed during Government Unoccupied Hours.

#### 3.4 CLEANING

- A. Clean areas and spaces where cutting and patching are performed. Completely remove all evidence of the Work.
- B. Thoroughly clean piping, conduit, and similar features before applying paint, restored pipe coverings, or other finishing materials.

**END OF SECTION 01 73 10**

## SECTION 01 73 20 - SELECTIVE DEMOLITION

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including Federal Acquisition Regulations (FAR) and General Services Administration Acquisition Regulations (GSAR) contract clauses, General and Supplementary Conditions, and Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. This section includes the following:
  - 1. Demolition and removal of selected portions of an existing building.
  - 2. Demolition and removal of selected site elements.
  - 3. Repair procedures for selective demolition operations.
- B. Definitions:
  - 1. Remove: Detach items from existing construction and legally dispose of them.
  - 2. Remove and Salvage or Recycling: Detach items from existing construction and deliver them to Government undamaged and ready for reuse or recycling
  - 3. Remove and Reinstall: Detach items from existing construction, prepare them for reuse, and reinstall them where indicated.
  - 4. Existing to Remain: Existing items of construction that are not to be removed.

#### 1.3 MATERIALS OWNERSHIP

- A. Except for items or materials indicated to be salvaged, reinstalled or otherwise indicated to remain the Government's property, demolished materials shall become the Contractor's property and shall be removed from the site.

#### 1.4 SUBMITTALS

- A. Qualification Data: List of demolition firm's completed projects with project addresses, and names and addresses of architects and owners.
- B. Proposed dust-control measures.
- C. Proposed noise-control measures.
- D. Schedule of Selective Demolition Activities: Indicate the following:
  - 1. Detailed sequence of selective demolition work, with starting and ending dates for each activity.
  - 2. Interruption of utility services.
  - 3. Coordination for shutoff, capping, and continuation of utility services.
  - 4. Use of elevator and stairs.

5. Locations of temporary partitions and means of egress.
  6. Procedures to ensure uninterrupted progress of Government's on-site operations.
  7. Coordination of Government's continuing occupancy of portions of existing building and of Government's partial occupancy of completed Work.
- E. Inventory: Items to be removed and salvaged.
- F. Photographs or Videotape: Before work begins, submit sufficiently detailed digital photographs or videotapes showing existing conditions of adjoining construction, including finish surfaces, to record pre-existing damage.
- G. Landfill Records: Indicate receipt and acceptance of all wastes, hazardous and otherwise. In accordance with EPA regulations hazardous materials must be disposed of at a landfill facility licensed to accept hazardous wastes.
- H. Sustainability Requirements: Refer to Division 01 Section "Sustainable Design Requirements."
- I. Qualification Data: For certified refrigerant recovery technician.
- J. Statement of Refrigerant Recovery: Signed by the certified refrigerant technician responsible for recovering the refrigerant; stating that all refrigerant and used refrigerant oil that was present was recovered and that the recovery was performed according to EPA regulations. Include name and address of technician and date refrigerant and used refrigerant oil was recovered. Include the name of the person or facility that received the recovered refrigerant for reuse. If disposal occurred per RCRA regulations, provide copies of disposal/incineration documentation.
- K. Completed Vendor Request for Shipping: For excess refrigerant to be prepared for pick-up by the DoD or its contractor.

#### 1.5 QUALITY CONTROL

- A. Demolition Firm Qualifications: Firm shall be a Specialist in demolition work of similar materials and extent to that indicated for this Project.
- B. Regulatory Requirements: Comply with governing EPA notification regulations before starting selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
- C. Standards: Comply with NFPA 241 and ANSI A10.6.
- D. Pre-Demolition Conference: Conduct conference at Project site to comply with requirements in Division 01 Section "Project Management and Coordination." Review methods and procedures related to selective demolition including, but not limited to, the following:
1. Inspect and discuss condition of construction to be selectively demolished.
  2. Review structural load limitations of existing structure.
  3. Review and finalize demolition schedule and verify availability of materials, demolition personnel, equipment, and facilities needed to make progress and avoid delays.
  4. Review requirements of work performed by other trades that rely on substrates exposed by demolition operations.
  5. Review procedures when hazardous materials are encountered.

- E. Refrigerant Recovery Technician Qualifications: Certified by an EPA-approved program.

## 1.6 PROJECT CONDITIONS

- A. Government will occupy portions of the building immediately adjacent to, above and below selective demolition areas.
  - 1. Conduct selective demolition so Government operations will not be disrupted.
  - 2. Provide GSA with not less than 72 hours' notice prior to activities that will affect Government operations.
- B. Maintain access to existing walkways, corridors and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from authorities having jurisdiction.
- C. Hazardous Materials: Hazardous materials are present. A report on the presence of hazardous materials is included elsewhere in the Contract Documents. Examine the report to become aware of locations where hazardous materials are present.
  - 1. Hazardous materials abatement is specified elsewhere in the Contract Documents.
  - 2. Do not disturb hazardous materials or any material suspected of containing hazardous materials except under the procedures specified elsewhere in the Contract Documents.
- D. On-site storage or sale of removed items or materials is not permitted.
- E. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.
- F. Fire Protection: Maintain fire-protection services during selective demolition operations.

## 1.1 WARRANTIES

- A. Existing Special Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during selective demolition, by methods and with materials that do not void existing warranties.

## PART 2 - PRODUCTS

### 2.1 REPAIR MATERIALS

- A. Where available and appropriate for use, provide repair materials that are identical to existing materials.
- B. Where identical materials are unavailable or cannot be used for exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible.
- C. Use materials whose installed performance equal or surpasses that of existing materials.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Verify that utilities to be removed have been disconnected and capped.
- B. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.
- C. Inventory and record the before and after condition of items to be removed and reinstalled, and items to be removed and salvaged. Protect any removed items during demolition.
- D. When encountering unanticipated mechanical, electrical or structural elements that conflict with the intended function or design, investigate and measure the nature and extent of the conflict. Promptly submit a written report to the Government's contracting officer.
- E. Survey the condition of the building to determine whether removing any element might result in a structural deficiency or unplanned collapse of any portion of the structure or adjacent structures during selective demolition. Report findings to the Government for determination.
- F. Perform surveys as the selective demolition progresses to detect hazards resulting from the activities. Report findings to GSA for determination.

### 3.2 UTILITY SERVICES

- A. Existing Utilities: Maintain services indicated to remain and protect them against damage during selective demolition operations.
- B. Do not interrupt existing utilities serving occupied or operating facilities, except when authorized in writing by authorities having jurisdiction.
  - 1. Provide temporary services during interruptions to existing utilities, as acceptable to governing authorities.
  - 2. Provide at least 72 hours' notice to GSA if shutdown of service is required during changeover.
- C. Utility Requirements: Locate, identify, disconnect, and seal or cap off indicated utility services serving areas to be selectively demolished.
  - 1. Arrange to shut off indicated utilities with utility companies.
  - 2. Where utility services are required to be removed, relocated or abandoned, provide bypass connections to maintain continuity of service to other parts of the building before proceeding with selective demolition.
  - 3. Cut off pipe or conduit in walls or partitions to be removed. Cap, valve or plug and seal the remaining portion of pipe or conduit after bypassing.
  - 4. Do not start selective demolition work until utility disconnection and sealing have been completed and verified.

### 3.3 PREPARATION



- A. Hazardous Materials: Drain, purge or otherwise remove, collect and dispose of chemicals, gases, explosives, acids, flammables or other hazardous materials before proceeding with selective demolition operations. See section 15950 Safety & Health. Advise the Government immediately if suspected hazardous materials are encountered in the course of the Work.
- B. Pest Control: If rodents and vermin are encountered, employ a certified, licensed exterminator to treat building and to control before and during selective demolition operations. Perform control operations lawfully, using environmentally safe materials.
- C. Temporary Site Control: Remove debris and conduct demolition operations in a manner to ensure minimum interference with roads, streets, walks, walkways, corridors, and other adjacent occupied or used facilities.
  - 1. Do not close or obstruct streets, walks, walkways, corridors, or other adjacent occupied or used facilities without permission from the Government and authorities having jurisdiction.
  - 2. Provide alternate routes around closed or obstructed traffic ways if required by governing regulations.
- D. Temporary Facilities: Conduct demolition operations in a manner to prevent injury to people and damage to adjacent building and facilities to remain. Provide for safe passage of people around selective demolition area.
  - 1. Erect temporary protection, such as walks, fences, railings, canopies and covered passageways, where required by authorities having jurisdiction.
  - 2. Protect existing site improvements, appurtenances and landscaping to remain.
  - 3. Protect walls, ceilings, floors and other existing finish work that are to remain and are exposed during selective demolition operations.
- E. Temporary Enclosures: Erect and maintain dust proof partitions and temporary enclosures to limit dust and dirt migration and to separate areas from fumes and noise.
- F. Temporary Shoring: Provide and maintain shoring, bracing or other structural support to preserve stability and prevent movement, settlement or collapse of building to be selectively demolished. Strengthen or add new supports when required during the progress of selective demolition.

### 3.4 POLLUTION CONTROLS

- A. Dust Control: Use temporary enclosures and other suitable methods complying with governing environmental protection regulations to limit the spread of dust and dirt.
  - 1. Do not use water when it may damage existing construction or create hazardous or objectionable conditions, such as ice, flooding or pollution.
  - 2. Wet-mop floors to eliminate trackable dirt, and wipe down walls and doors of demolition enclosure.
- B. Disposal: Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
  - 1. Remove debris from upper levels of building by chute, hoist, or other device that will convey debris to grade level.
- C. Cleaning: Clean adjacent structures and site improvements of dust, dirt and debris caused by selective demolition operations. Return adjacent areas to condition existing before start of selective demolition.

### 3.5 SELECTIVE DEMOLITION

- A. Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete selective demolition within limitations of governing regulations and as follows:
1. Proceed with selective demolition systematically. Conduct work in an order that avoids transporting removed items and debris through areas with completed selective demolition work, and that allows for removal of items before supports for those items are removed in another area.
  2. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage adjoining construction to remain. Use hand or small power tools designed for sawing or grinding, not for hammering and chopping, to minimize disturbance of adjacent surfaces. Temporarily cover openings to remain.
  3. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
  4. Before using cutting torches, Contractor must request a burning permit from the Government at least 48 hours before performing the work. Clear work area of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain portable fire-suppression devices during flame-cutting operations, and maintain adequate ventilation when using cutting torches.
  5. Remove decayed, vermin-infested and other hazardous or unsuitable materials, and promptly dispose of these materials off-site.
  6. Lower removed structural framing members to ground by method suitable to avoid free fall and to prevent ground impact or dust generation.
  7. Locate selective demolition equipment throughout the structure and remove debris and materials so as not to impose excessive loads on supporting walls, floors or framing.
  8. Return elements of construction and surfaces to remain to condition existing before start of selective demolition operations.
- B. Existing Facilities: Comply with building manager's regulations for using and protecting elevators, stairs, walkways, loading docks, building entries and other building facilities during selective demolition operations.
- C. Repair and Storage of Salvaged Items and Items to be Reinstalled:
1. Repair: Clean and repair the materials and equipment to functional condition adequate for intended reuse. Paint damaged or deteriorated painted surfaces of equipment to match new equipment.
  2. Storage: Store the materials and equipment in a secure dry area until final reinstallation or disposal.
- D. Salvaged Items and Items to be Reinstalled:
1. Reinstallation: Where items are indicated to be removed and reinstalled, install the materials and equipment in locations indicated. Comply with installation requirements for new materials and equipment.
  2. Delivery to Government: Where items are indicated to be removed and salvaged, transport the materials and equipment to the area on-site designated by the Government or indicated on the Drawings. Properly protect all salvaged items.
- E. Protection of Salvaged Items: For items which must be reinstalled at the same removal site, mark each item indelibly in concealed fashion and codify a document such that the items can be placed back in to the place where they were removed. Pack or crate salvaged materials and equipment

after removal. Identify contents of containers. Protect items from damage during transport and storage.

- F. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by GSA, items may be removed to a suitable, protected storage location during selective demolition and then cleaned and reinstalled in their original locations.
- G. Concrete and Masonry: Demolish concrete and masonry in small sections. At junctures with construction to remain, cut concrete and masonry using power-driven masonry saw or hand tools; do not use power-driven impact tools unless no damage will occur to materials to remain.
- H. Resilient Floor Coverings: Remove floor coverings and adhesive, and prepare substrates for new floor coverings, according to recommendations of the Resilient Floor Covering Institute (RFCI).
- I. Air-Conditioning Equipment: Remove equipment without releasing refrigerants.
- J. Recycling: Provide separate bins or roll-offs for each material to be recycled onsite.

### 3.6 USED REFRIGERANT RECOVERY, RECLAMATION AND DISPOSAL

- A. Recover means to remove refrigerant in any condition from an appliance without necessarily testing or processing it in any way.
- B. Reclaim means to process refrigerant to at least the purity specified in the ARI Standard 700-2006, Specifications for Fluorocarbon Refrigerants (Appendix A to 40 CFR, Part 82, Subpart F), and to verify this purity using the analytical methodology prescribed in the ARI Standard 700-2006.
- C. All refrigerant from the chiller[s] and piping shall be recovered by a qualified Refrigerant Recovery Technician prior to any demolition thereof. Recovery and reclamation shall be in accordance with in accordance with ARI Standard 700-2006, or latest edition, and Appendix A to 40 CFR, Part 82, Subpart F, dated July 24, 2003. The refrigerant shall be sealed in containers approved by the Interstate Commerce Commission (ICC) and the U.S. Department of Transportation (DOT) for this substance.
- D. All refrigerant shall be recovered and disposed of in accordance with applicable EPA regulations and other codes.
- E. The Contractor shall not salvage any refrigerant from any equipment removed on this project.

### 3.7 USED REFRIGERANT OIL DISPOSAL

- A. Recover means to remove in any condition from an appliance without necessarily testing or processing it in any way.
- B. All refrigerant oil shall be recovered and disposed of in accordance with applicable EPA regulations and other codes. This oil shall not be mixed with any other type of waste oil, grease or solvent.

### 3.8 PATCHING AND REPAIRS

- A. The Government shall determine the acceptability of patch and repair work.
- B. Promptly patch and repair holes and damaged surfaces caused to adjacent construction by selective demolition operations.
- C. Repairs: Where repairs to existing surfaces are required, patch to produce surfaces suitable for new materials.
  - 1. Completely fill holes and depressions in existing masonry walls to remain with an approved masonry patching material applied according to the manufacturer's written recommendations.
- D. Finishes: Restore exposed finishes of patched areas and extend finish restoration into adjoining construction to remain in a manner that eliminates evidence of patching and refinishing.
- E. Floor and Wall Surfaces: Patch and repair floor and wall surfaces in each space where demolished walls or partitions result in extending one finished area into another. Provide a flush and even surface of uniform color and appearance.
  - 1. Closely match texture and finish of existing adjacent surface.
  - 2. Patch with durable seams that are as invisible as possible. Comply with specified tolerances.
  - 3. Where patching smooth painted surfaces, extend final paint coat over entire unbroken surface containing the patch after the patched surface has received primer and other specified undercoats. Painting shall be full panels to the point where material breaks or change of texture occur.
  - 4. Remove existing floor and wall coverings and replace with new materials, if necessary to achieve uniform color and appearance.
  - 5. Where feasible, inspect and test patched areas to demonstrate integrity of the installation.
- F. Ceilings: Patch, repair or rehang existing ceilings as necessary to provide an even-plane surface of uniform appearance.

### 3.9 DISPOSAL OF DEMOLISHED MATERIALS

- A. Promptly dispose of demolished materials. Do not allow demolished materials to accumulate on-site.
- B. Dispose of any small refrigerant containing equipment (i.e. room air conditioners, water fountains, refrigerators, etc.) that was demolished with its charge intact in accordance with all Federal, State and local safe disposal requirements.
- C. Do not burn demolished materials.
- D. Disposal: Transport demolished materials to be recycled to a qualified recycling center for the specific material. Provide weight-ticket receipts for each load delivered.

**END OF SECTION 01 73 20**

## SECTION 01 77 00 - CLOSEOUT PROCEDURES

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including Federal Acquisition Regulations (FAR) and General Services Administration Acquisition Regulations (GSAR) contract clauses, General and Supplementary Conditions, and Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. See Section III of the Agreement for Definition of Substantial Completion.
- B. All electronic record documents submittals shall be uploaded to GSA's electronic Project Management (ePM) system.
- C. This Section includes administrative and procedural requirements for Contract Closeout including, but not limited to, the following:
  - 1. Substantial Completion procedures.
  - 2. Project record document submittals.
  - 3. Operation and maintenance manual submittals.
  - 4. Final cleaning
  - 5. Final Punchlist.
  - 6. Repair of the Work.
- D. Closeout requirements for specific construction activities are included in the individual sections in Divisions 02 through 49.

#### 1.3 SUBSTANTIAL COMPLETION

- A. Preliminary Procedures: Before requesting inspection for Substantial Completion, complete the following.
  - 1. Provide supporting documentation for completion as indicated elsewhere in the Contract Documents.
  - 2. Submit a list to the Government, of incomplete items, the value of incomplete construction, and reasons the Work is not complete.
  - 3. Obtain and submit releases enabling the Government unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
  - 4. Submit closeout submittals from other Division 01 sections, project record documents including electronic documents, operation and maintenance manuals, final project photographs, damage or settlement survey, and utility lines survey.
  - 5. Warranties and guarantees shall not begin until substantial completion. Warranties and guarantees for any equipment that comes on line at a later date which is accepted by the Government shall commence on that date.
  - 6. Contractor shall make final changeover of permanent locks and transmit all keys (including duplicates) to GSA. Complete startup testing of systems and instruction of the Government operation and maintenance personnel. Discontinue and remove temporary facilities from

- the site, along with mockups, construction tools, and similar elements. Submit test/adjust/balance records.
7. HVAC Balance and Testing must be completed within seasonal limitations.
  8. Commissioning must be completed within seasonal limitations.
  9. Warranty of any systems or items being used during the occupancy period shall have been completed and submitted at the time of government's written acceptance including the date for Notice of Substantial Completion. The Authority Having Jurisdiction is the Government.
  10. The punch list of non-completed work and items shall be entire, valued, and submitted.
  11. Completion of punch list items must be completed within sixty (60) days.
  12. The electronic format for Operations and Maintenance materials must contain word search features.
- B. Inspection Procedures: On receipt of a request for inspection, GSA will either proceed with inspection or advise the Contractor of unfulfilled requirements. GSA will notify the Contractor of Substantial Completion following the inspection or advise the Contractor of construction that must be completed or corrected before Substantial Completion.
1. GSA will repeat the inspection when requested and when assured that the Work is substantially complete.
  2. Results of the completed inspection will form the basis of the requirements for Final Acceptance.
  3. Items that are not included on the punch-list will not relieve the Contractor from performing all work required and in accordance with the construction documents.

#### 1.4 FINAL ACCEPTANCE FOR CONTRACT COMPLETION

- A. Preliminary Procedures: Before requesting re-inspection for Final Acceptance, complete the following:
1. Submit an updated final statement, accounting for final additional changes to the Contract price.
  2. Submit a certified copy of the previous Substantial Completion inspection list of items to be completed or corrected. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance, and shall be endorsed and dated by the Contractor.
  3. Submit specific warranties, workmanship bonds, maintenance agreements, final certifications and similar documents. State warranty commencement dates.
  4. Scan warranties and bonds and assemble complete warranty and bond submittal package into a single indexed electronic PDF file with links enabling navigation to each item.
  5. Scan warranties and bonds and assemble complete warranty and bond submittal package as individual electronic PDF files.
  6. Submit record documents including BIM, model and data and similar final record information. See Division 01 Section "Project Record Documents" for BIM requirements.
  7. Deliver tools, spare parts, extra stock and similar items.
  8. Complete final clean-up requirements including touch-up painting of marred surfaces.
  9. Submit final meter readings for utilities, a measured record of stored fuel, and similar data as of the date when the Government took possession of and assumed responsibility for corresponding elements of the work.
  10. At the end of the acceptance submit final payment request with releases and supporting documentation not previously submitted and accepted.
- B. Re-inspection Procedure: GSA will re-inspect the Work upon receipt of notice from the Contractor that the Work, including inspection list items from earlier inspections, has been completed, except for items whose completion is delayed under circumstances acceptable to GSA.

1. Upon completion of re-inspection, GSA will notify the Contractor of Final Acceptance or will advise the Contractor of Work that is incomplete or of obligations that have not been fulfilled and are required for Final Acceptance.
  2. If necessary, re-inspection will be repeated.
- C. Contractor's Responsibility for Re-Inspection Following Substantial Completion: If the final completion or acceptance is delayed for more than thirty (30) calendar days following substantial completion through no fault of the Government, CM, or the A/E, the Contractor shall be responsible for the Government's additional costs associated with re-inspections. During this 30-day period, the CM and/or A/E will make only one (1) re-inspection to verify completion of the punch list. Any additional re-inspections, administrative services, or direct costs will be considered CM and/or A/E additional services. The Government's actual costs for CM and/or A/E additional re-inspections, administrative services, or direct costs will be charged to the Contractor through an appropriate contract modification in the form of a credit to the Government.
- D. Contractor's Responsibility for Repeated Efforts to Commission: If acceptance is delayed for more than 30 calendar days following the initial efforts to commission through no fault of the Government, CM, or the A/E; the Contractor shall be responsible for the Government's additional costs associated with resolving continued commissioning efforts. During this 30-day period, the CM and/or A/E will make only one (1) additional effort to resolve and commission. Any additional effort to resolve and commission, administrative services, or direct costs will be considered CM and/or A/E additional services. The Government's actual costs for CM and/or A/E additional effort to resolve and commission, administrative services, or direct costs will be charged to the Contractor through an appropriate Change Order.
- 1.5 RECORD DOCUMENT SUBMITTALS
- A. Certificates of Release: From authorities having jurisdiction.
- B. Certificate of Insurance: For continuing coverage.
- C. Field Report: For pest control inspection.
- D. Do not use record documents for construction purposes. Protect record documents from deterioration and loss in a secure, fire-resistant location. Provide access to record documents for GSA's reference during normal working hours.
- E. Record As-Built Drawings: Maintain both electronic media copies and a clean, undamaged set of blue or black line white-prints of all Contract Documents. Mark the set to show the actual installation where the installation varies substantially from the Work as originally shown. Mark the drawing that is most capable of showing conditions fully and accurately. Where Shop Drawings are used, record a cross-reference at the corresponding location on the Contract Drawings. Give particular attention to concealed elements that would be difficult to measure and record at a later date. Electronic record copies showing changes shall be done clearly such that the changes are understood so that they can be constructed. Upload to ePM.
1. Mark record print sets with red erasable pencil. Use other colors to distinguish between variations in separate categories of the Work.
  2. Mark new information not shown on Contract Drawings or Shop Drawings.
  3. Note related modification numbers where applicable.
  4. Organize record drawing sheets into manageable sets. Bind sets with durable-paper cover sheets. Print suitable titles, dates, and other identification on the cover of each set.

- F. Record Specifications: Maintain one complete copy of the Specifications with addenda. Include one copy of other written construction documents, such as modifications issued in printed form during construction.
  - 1. Mark these documents to show substantial variations in actual Work performed in comparison with the text of the original contract Specifications and modifications.
  - 2. Give particular attention to substitutions and selection of options, and information about concealed construction that cannot otherwise be readily determined later by direct observation. Provide digital photos or videos of construction areas before being concealed.
  - 3. Note related record drawing information and Product Data.
- G. Record Product Data: Maintain one copy of each Product Data submittal. Note related modifications and markups of Record Drawings and Specifications.
  - 1. Mark these documents to show significant variations in actual Work performed in comparison with information submitted. Include variations in products delivered to the site and from the manufacturer's installation instructions and recommendations.
  - 2. Before concealing areas document with digital photos or video on a CD or DVD. Give particular attention to concealed products and portions of the Work that cannot otherwise be readily determined later by direct observation.
- H. Record Samples: Immediately prior to Substantial Completion, the Contractor shall meet with GSA's Representative at the Project site to determine which samples are to be transmitted to the Government for record purposes. Comply with GSA's instructions regarding delivery to the Government's Sample storage area.
- I. Miscellaneous Record Submittals: Refer to other Specification sections for requirements for miscellaneous record keeping and submittals in connection with actual performance of the Work. Place miscellaneous records in good order. Identify records properly and bind or otherwise organize to allow for use and reference.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

- A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.
- B. Use cleaning products that comply with Green Seal GS-37, or if GS-37 is not applicable, use products that comply with the California Code of Regulations maximum allowable Volatile Organic Compounds (VOC) levels.

## PART 3 - EXECUTION

### 3.1 CLOSEOUT PROCEDURES

- A. Operation and Maintenance Instructions: Arrange for each Installer of equipment that requires regular maintenance to meet with the Government's personnel to provide instruction in proper operation and maintenance. Provide instruction by manufacturer's representatives if installers are



not experienced in operation and maintenance procedures. Include a detailed review of the following:

1. Electronic File: Scan warranties and bonds and assemble complete warranty and bond submittal package as individual electronic PDF files.
2. Operation and Maintenance manuals.
3. Material and Finishes Maintenance Manuals
4. Record documents.
5. Photo CDs or DVDs of any hidden or concealed construction areas.
6. Spare parts and materials.
7. Attic stock.
8. Tools.
9. Lubricants.
10. Fuels.
11. Identification systems.
12. Control sequences.
13. Hazards.
14. Cleaning.
15. Warranties and bonds.
16. Maintenance agreements and similar continuing commitments
17. Keys, security hardware or security information.

B. As part of instruction for operating equipment, demonstrate the following procedures:

1. Startup.
2. Final commissioning coordination.
3. Shutdown.
4. Emergency operations.
5. Noise and vibration adjustments.
6. Safety procedures.
7. Economy and efficiency adjustments.
8. Effective energy utilization.

### 3.2 FINAL CLEANING

A. Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to the condition expected in a normal, commercial cleaning and maintenance program. Comply with manufacturer's instructions.

B. Do not use caustic or acidic cleaning materials that will mar or etch finished work.

1. Complete the following cleaning operations before requesting inspection for Final Acceptance.
  - a. Remove labels that are not permanent labels.
  - b. Clean transparent materials, including mirrors and glass in doors and windows. Removing glazing compounds and other substances that are noticeable vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials.
  - c. Clean exposed exterior and interior hard-surface finishes to a dust-free condition, free of stains, films, and similar foreign substances. Restore reflective surfaces to their original condition. Leave concrete floors broom clean. Vacuum carpeted surfaces on floors and soft surfaces in any other location.
  - d. Wipe surfaces of mechanical and electrical equipment. Remove excess lubrication and other substances. Clean plumbing fixtures to a sanitary condition. Clean light fixtures and lamps. Replace disposable air filters and clean permanent air filters.

- Clean exposed surfaces of diffusers, registers, and grills. Clean interiors of all ductwork to render facility safe for human occupancy.
    - e. Clean the site, including landscape development areas, of rubbish, litter and other foreign substances. Sweep paved areas broom clean, and remove stains, spills, and other foreign deposits. Rake grounds that are neither paved nor planted to a smooth, even-textured surface.
    - f. Remove debris and surface dust from limited-access spaces including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics and similar spaces.
    - g. Clean food service equipment, if present, to a condition of sanitation ready and acceptable for intended food service use.
  - C. Pest Control: Engage an experienced, licensed exterminator to make a final inspection and rid the Project of rodents, insects, and other pests.
  - D. Removal of Protection: Remove temporary protection and facilities installed for the protection of the Work during construction.
  - E. Compliance: Comply with the regulations of authorities having jurisdiction and with safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on Government property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from the site and dispose of it lawfully.
  - F. Remaining Materials of value that remain after completion of associated work, become Government property. Dispose of or salvage/recycle these materials as directed by GSA.
- 3.3 REPAIR OF THE WORK
- A. Complete repair and restoration operations before requesting inspection for determination of Substantial Completion.
  - B. Repair, or remove and replace, defective construction. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment. Where damaged or worn items cannot be repaired or restored, provide replacements. Remove and replace operating components that cannot be repaired. Restore damaged construction and permanent facilities used during construction to specified condition. All components of the construction including operational and material shall be in new condition and new working order at the completion of Repair of the Work.

**END OF SECTION 01 77 00**

## SECTION 017810 - PROJECT RECORD DOCUMENTS

### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. This section includes administrative and procedural requirements that the Contractor must perform with regards to Project Record Documents. These include but are not limited to those defined in Part B. Electronic records that show identifiable changes shall be done. The following normally must be included, and the Contractor is required to show any other changes not listed below:
- B. All electronic project record documents shall be uploaded to GSA's electronic Project Management (ePM) system.
  - 1. Marked-up copies of Contract Drawings.
  - 2. Marked-up copies of Shop Drawings.
  - 3. Newly prepared record drawings.
  - 4. Marked-up copies of Specifications, addenda, and Change Orders.
  - 5. Marked-up Product Data submittals.
  - 6. Record Samples.
  - 7. Field records for variable and concealed conditions.
  - 8. Record information on Work that is recorded only schematically.
  - 9. Operating manuals with a schematic diagram, sequence of operation, and system operating criteria for each system installed. Training materials and videos. Equipment maintenance manuals with complete information for all major components.
  - 10. Computer Aided Design (CAD) drawings.
- C. Maintenance of Documents and Samples: Store both electronic media and hard copy Record Documents and samples in the field office apart from the Contract Documents used for construction in clean, dry conditions. They shall be readily accessible. Do not use Project Record Documents for construction purposes. All electronic Project Record Documents should be uploaded to ePM.

#### 1.3 RECORD DRAWINGS

- A. Markup Procedure: During construction, the Contractor shall maintain a set of black-line white prints of Contract Drawings and Shop Drawings for Project Record Document purposes. Contractor shall mark these Drawings to show all changes that have been done. If BIM is not used, Contractor shall maintain a copy of the Contract Document CAD files showing these changes to the physical conditions.
  - 1. Mark record prints of Contract Drawings or Shop Drawings, whichever is most capable of showing actual physical conditions sufficient to construct the changes. Where Shop Drawings are marked, show cross-reference on Contract Drawings location. Identify each change to coordinate with accompanying, if any, Record Documents.
  - 2. Mark hard copy record sets with red erasable colored pencil. Use other colors to distinguish between changes for different categories of the Work at the same location.
  - 3. Both the bound, organized, and labeled hard copies and the electronic media shall be submitted prior to Final Acceptance.

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4. The Contractor is responsible for any printing costs associated with Project Record Drawings. The Contractor shall submit a preliminary set of record drawings for review and acceptance. Before copying and distributing, submit corrected documents and the original marked-up prints to the Government for review and acceptance. If acceptable, the government will return the original marked-up prints to the Contractor for organizing into sets, printing, binding, and final submittal.
- B. Copies Distribution: After completing the preparation of [CAD] Record Documents, the Contractor shall provide electronic media of each drawing, whether or not changes and additional information were recorded. These full sets will be the hard copy of record drawings for filing purposes; they are not intended for use in later maintenance on the facility. Organize the copies into manageable sets. Include appropriate identification, including titles, dates, and other information on the cover sheets.
  1. Organize and bind original marked-up set of prints that were maintained during the construction period in the same manner.
  2. Organize record into sets matching the print sets. Place these sets in durable tube-type drawing containers with end caps. Mark the end cap of each container with suitable identification.
  3. Submit the marked-up record set, transparencies, and the copy sets to the Contracting Officer for the Government's records.
- C. Newly Prepared Construction Drawings into Record Drawings: When neither the original Contract Drawings nor Shop Drawings are not suitable for converting into ion, record drawings prepare new drawings instead of following procedures specified in part A.. These new drawings will be fully developed as contract drawings. New drawings may be required when a Change Order is issued as a result of accepting an alternate, substitution, or other modification.
  1. Provide Drawings in a scale that allows for the scope of detailing and notations required to record the actual physical installation and its relationship to other construction.
  2. When completed and accepted, integrate newly prepared Drawings with procedures specified for organizing, copying, binding and submitting record drawings.

## 1.2 RECORD SPECIFICATIONS

- A. During the construction period, the Contractor shall maintain the Project Specifications, including addenda and other modifications issued, for Project Record Document purposes.
  1. Mark the Specifications or provide new or edited Specifications to indicate the actual installation where the installation varies from that indicated in Specifications. Provide dates and other identifying information to discriminate them from the existing Specifications. These shall be fully coordinated with the other contract documents.
    - a. In each Specification section where products, materials or units of equipment are specified or scheduled, mark the copy with the proprietary name and model number of the product furnished.
    - b. Record the name of the manufacturer, supplier, installer, and other information necessary to provide a record of selections made and to document coordination with record Product Data submittals and maintenance manuals.
    - c. Give particular attention to substitutions, selection of product options, and information on concealed installations that would be difficult to identify or measure and record later.
  2. Upon completion of markup, submit above mentioned Record Specifications to the Government in electronic mediums.

## 1.3 RECORD PRODUCT DATA

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- A. During the construction period, maintain one copy of each Product Data submittal.
  - 1. Mark Product Data to indicate the actual product installation where the installation varies from that indicated in Product Data submitted. Include changes in the product delivered to the site and changes in manufacturer's instructions and recommendations for installation.
  - 2. Give particular attention to information about concealed products and installations that cannot be readily identified and recorded later.
  - 3. Note related Change Orders and markup of Record Drawings, where applicable.
  - 4. Upon completion of markup, submit a complete set of record Product Data to the Government. Where record Product Data is required as part of maintenance manuals, submit marked-up Product Data as an insert in the manual instead of submittal as record Product Data.
  - 5. Where BIM is used, individual Product Data in PDF format shall be linked to individual components in the record BIM and shall be compliant to section 013600 Construction Operations Building information exchange.

#### 1.4 RECORD SAMPLE SUBMITTAL

- A. Immediately prior to the date of Substantial Completion, the Contractor shall meet with the Contracting Officer's Representative at the site who shall determine which of the Samples maintained during the construction period shall be transmitted to the Government for record purposes.
- B. Comply with the Government's instructions for packaging, identification marking and delivery to the Government's sample storage space. Dispose of other samples in a manner specified for disposing of surplus and waste materials.

#### 1.5 MISCELLANEOUS RECORD SUBMITTALS

- A. Refer to other Specification sections for miscellaneous record-keeping requirements and submittals in connection with various construction activities. Prior to Final Acceptance, complete Miscellaneous Records and place in good order, properly identified and bound or otherwise organized to allow for use and reference.
- B. Miscellaneous Records include, but are not limited to, the following:
  - 1. Field records on excavations and foundations.
  - 2. Field records on underground construction and similar work.
  - 3. Survey showing locations and elevations of underground lines.
  - 4. Invert elevations of drainage piping.
  - 5. Surveys establishing building lines and levels.
  - 6. Authorized measurements utilizing unit prices or allowances.
  - 7. Records of plant treatment.
  - 8. Ambient and substrate condition tests.
  - 9. Certifications received in lieu of labels on bulk products.
  - 10. Batch mixing and bulk delivery records.
  - 11. Testing and qualification of tradespersons.
  - 12. Documented qualification of installation firms.
  - 13. Load and performance testing.
  - 14. Inspections and certifications by governing authorities.
  - 15. Leakage and water-penetration tests.
  - 16. Fire-resistance and flame-spread test results.
  - 17. Final inspection and correction procedures.
  - 18. Energy and daylighting modeling documentation.

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- 19. Waste management records.
- 20. LEED certification documentation.
- C. Submit to the Government.

PART 2 - PRODUCTS (Not Applicable)  
PART 3 - EXECUTION (Not Applicable)

END OF SECTION 017810

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## **SECTION 01 81 11 -- SUSTAINABLE DESIGN GUIDELINES**

### **PART 1 – GENERAL**

#### **1.1 SUMMARY**

- A. This Section describes general requirements and procedures to comply with the Guiding Principles for Federal Leadership in High Performance and Sustainable Buildings, Executive Orders 13423 and 13514, the Energy Policy Act of 2005 (EPAct 2005), and the Energy Independence and Security Act of 2007 (EISA 2007).
- B. Contractor shall be required to coordinate with subsequent technical sections herein as to the sustainability requirements.

#### **1.2 OBJECTIVES**

- A. Contractor's responsibilities include the purchasing, constructing and documenting the use of sustainable products. Refer also to the latest GSA Green Purchasing Plan and latest GSA sustainability policies.
- B. gBUILD (Green Building Upgrade Information Lifecycle Database) is GSA's system for tracking and reporting high-performance green building (HPGB) related data. gBUILD allows project teams to collaborate in a centralized secure environment that reduces and streamlines data calls for program-wide reporting. Internal GSA users and external users will be provided usernames and passwords.

#### **1.3 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including Federal Acquisition Regulations (FAR) and General Services Administration Acquisition Regulations (GSAR) contract clauses, General and Supplementary Conditions, and Division 01 Specification Sections, apply to this Section.
- B. The Government is providing the references included in this sub-section for information purposes only, and is not intended to provide a comprehensive, all-inclusive list of any and all potentially relevant portions of the Contract Documents.
- C. Division 01 Section "Construction Indoor Air Quality (IAQ) Management."
- D. Division 01 Section "Construction Nonhazardous Waste & Management Disposal."
- E. Division 01 Section "General Commissioning Requirements."

#### **1.4 SUBMITTALS**

- A. Shall meet LEED documentation requirements. In the event that the Contractor's submittal cannot comply with both standards, then the more stringent standard shall apply.
- B. Commissioning: See Division 01 Section "General Commissioning Requirements" for submittal requirements.

- C. Sustainable Design Progress Reports: Concurrent with each Application for Payment, submit reports for the following:
1. Construction Waste Management: Waste reduction progress reports and logs complying with the requirements of Division 01 Section "Construction Nonhazardous Waste & Management Disposal."
  2. Construction IAQ Management: See Division 01 Section "Construction Indoor Air Quality (IAQ) Management" Construction IAQ management progress report requirements.

#### 1.5 QUALITY CONTROL

- A. Preconstruction Meeting: After award of Contract and prior to the commencement of the Work, schedule and conduct meeting with Owner, Architect, and all Subcontractors to discuss sustainability requirements, expected submittals, the Construction Waste Management Plan, and the required Construction Indoor Air Quality (IAQ) Management Plan. The purpose of this meeting is to develop a mutual understanding of the project's sustainable design requirements and coordination of the Contractor's management of these requirements with the Contracting Officer and the Construction Quality Manager.
- B. Construction Job Conferences: The status of compliance with the sustainable design requirements of these specifications will be an agenda item at all regular job meetings conducted during the course of work at the site.

#### PART 2 - PRODUCTS

Products and processes that minimize environmental impact to the extent currently possible have been included in the Construction Documents. These products include but are not limited to paint, gypsum wall board, carpet, acoustic ceiling tile and concrete. The Contractor is responsible for maintaining and supporting these objectives in developing means and methods for performing the work of this Contract and in proposing product substitutions and/or changes to specified processes.

**END OF SECTION 01 81 11**



## **SECTION 01 81 15 – LIMITS FOR VOLATILE ORGANIC COMPOUND CONTENTS FOR ADHESIVES, SEALANTS, PAINTS AND COATINGS**

### **PART 1 - GENERAL**

#### **1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including Federal Acquisition Regulations (FAR) and General Services Administration Acquisition Regulations (GSAR) contract clauses, General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

#### **1.02 SUMMARY**

- A. This Section defines the volatile organic compound (VOC) content limits for the adhesives, sealants, paints and architectural coatings used in the project. Chemical component limitations are also defined for some categories of paint and primer.

#### **1.03 RELATED SECTIONS**

- A. Division 01 Section "Sustainable Design Requirements."
- B. Division 01 Section "Construction Indoor Air Quality (IAQ) Management."
- C. Specifications in Divisions 02 through 49 with field-applied adhesive, sealant coating or paint used in interior applications.

#### **1.04 REFERENCE STANDARDS AND REGULATORY REQUIREMENTS**

- A. General: Rules and regulations of other jurisdictions are cited as the reference standard for certain types of pollutants. These reference standards are fully applicable to the Work even though the project is not located in those jurisdictions.
- B. Rule 1168 – "Adhesive and Sealant Applications", effective date of July 1, 2005, and Rule Amendment date of January 7, 2005: South Coast Air Quality Management District (SCAQMD), State of California, [www.aqmd.gov](http://www.aqmd.gov).
- C. Green Seal Standard for Commercial Adhesives GS-36, requirements in effect October 19, 2000.
- D. "Green Seal Standard for Architectural Coating" (GS-11), plus "Green Seal Standard for Anti-Corrosive Paints" (GC-03).
- E. Rule 1113 - : Architectural Coatings", amended 7/9/04: South Coast Air Quality Management District (SCAQMD), State of California, [www.aqmd.gov](http://www.aqmd.gov).

#### **1.05 GREEN BUILDING GENERAL REQUIREMENTS**

- A. The Owner requires the Contractor to implement practices and procedures to meet the Project's environmental goals, which include achieving the specified LEED certification. Specific project goals which may impact this and the other sections of this specification include: use of recycled-content materials; use of locally-manufactured materials; use of low-emitting materials; use of

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certified wood products; construction waste recycling; and the implementation of a construction indoor air quality management plan. The Contractor shall ensure that the requirements related to these goals, as defined in the sections below and in related sections of the contract documents, are implemented to the fullest extent. Substitutions, or other changes to the work proposed by the Contractor or their Subcontractors, shall not be allowed if such changes compromise the stated GREEN BUILDING Performance Criteria.

#### 1.06 VOC REQUIREMENTS FOR ADHESIVES

- A. The volatile organic compound (VOC) content of adhesives, adhesive bonding primers, or adhesive primers used in this project shall not exceed the limits defined in Rule 1168 – “Adhesive and Sealant Applications” of the South Coast Air Quality Management District (SCAQMD), of the State of California.
- B. VOC content of aerosol adhesives shall not exceed the limits defined in the Green Seal Standard for Commercial Adhesives GS-36, requirements in effect October 19, 2000.
- C. The VOC limits defined by SCAQMD (based on 1/7/05 amendments) are as follows. All VOC limits are defined in grams per liter, less water and less exempt compounds.
- D. General: Unless otherwise specified below, the VOC content of all adhesives, adhesive bonding primers, or adhesive primers shall not be in excess of 250 grams per liter.
- E. For specified applications, the allowable VOC content is as follows:

1. Architectural Applications:

a.	Indoor carpet adhesive	50
b.	Carpet pad adhesive	50
c.	Outdoor carpet adhesive	150
d.	Wood flooring adhesive	100
e.	Rubber floor adhesive	60
f.	Sub-floor adhesive	50
g.	Ceramic tile adhesive	65
h.	VCT and asphalt tile adhesive	50
i.	Drywall and panel adhesive	50
j.	Cove base adhesive	50
k.	Multipurpose construction adhesive	70
l.	Structural glazing adhesive	100
m.	Single ply roof membrane adhesives	250

2. Specialty Applications:

a.	PVC welding	150
b.	CPVC welding	490
c.	ABS welding	325
d.	Plastic cement welding	250
e.	Adhesive primer for plastic	550
f.	Contact Adhesive	80
g.	Special Purpose Contact Adhesive	250
h.	Adhesive Primer for Traffic Marking Tape	150
i.	Structural Wood Member Adhesive	140
j.	Sheet Applied Rubber Lining Operations	850

3. Substrate Specific Applications:

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a.	Metal to metal	30
b.	Plastic foams	50
c.	Porous material (except wood)	50
d.	Wood	30
e.	Fiberglass	80

- F. If an adhesive is used to bond dissimilar substrates together, the adhesive with the highest VOC content shall be allowed.
- G. VOC limits for Aerosol Adhesives (defined as percentage of VOC weight in grams per liter less water)
1. General purpose mist spray 65% VOCs by weight
  2. General purpose web spray 55% VOCs by weight
  3. Special purpose aerosol adhesives (all types) 70% VOCs by weight

#### 1.07 REQUIREMENTS FOR SEALANTS

- A. The VOC content of sealants or sealant primers used in this project shall not exceed the limits defined in Rule 1168 – “Adhesives and Sealant Applications” of the South Coast Air Quality Management District (SCAQMD).
- B. The VOC limits defined by SCAQMD Rule 1168. All VOC limits are defined in grams per liter, less exempt compounds.
1. Sealants:

a.	Architectural	250
b.	Marine Deck	760
c.	Roadways	250
d.	Single Ply Roof Material Installation/Repair	450
e.	Non-membrane Roof Installation/Repair	300
f.	Other	420

2. Sealant Primer:

a.	Architectural – Nonporous	250
b.	Architectural – Porous	775
c.	Other	750

#### 1.08 VOC LIMIT REQUIREMENTS FOR PAINTS

- A. Paints and Primers (Non-specialized applications): Paints and primers used in non-specialized interior and exterior applications shall meet the VOC and chemical component limitations of the Green Seal Paint Standard GS-11, and anti-corrosive paints (those used in preventing the corrosion of ferrous metal substrates) shall meet the VOC and chemical component limitations of Green Seal Standard GC-03 of Green Seal, Inc., Washington, DC. Product-specific environmental requirements are as follows:
1. VOC concentrations (in grams per liter) of the product shall not exceed those listed below as determined by U. S. Environmental Protection Agency (EPA) Reference Test Method 24.
  2. Interior Coatings:

a.	Non-flat:	150
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3.	b.	Flat:	50
	Interior Anti-Corrosive Paints:		
4.	a.	Gloss	250
	b.	Semi-gloss	250
	c.	Flat	250
5.	Exterior Coatings:		
	a.	Non-flat:	200
6.	b.	Flat	100

5. The calculation of VOC shall exclude water and tinting color added at the point of sale.
6. Chemical Component Limitations - Aromatic Compounds: the product must contain no more than 1.0% by weight of the sum total of aromatic compounds. Testing for the concentration of these compounds will be performed if they are determined to be present in the product during a materials audit.
7. Chemical Component Limitations - Other Chemicals: the manufacturer shall demonstrate that the following chemical compounds are not used as ingredients in the manufacture of the product.
  - a. Halomethanes: methylene chloride
  - b. Chlorinated ethanes: 1,1,1-trichloroethane
  - c. Aromatic solvents: benzene, toluene (methylbenzene), ethylbenzene
  - d. Chlorinated ethylenes: vinyl chloride
  - e. Polynuclear aromatics: naphthalene
  - f. Chlorobenzenes: 1,2-dichlorobenzene
  - g. Phthalate esters: di (2-ethylhexyl) phthalate, butyl benzyl phthalate, di-n-butyl phthalate, di-n-octyl phthalate, diethyl phthalate, dimethyl phthalate
  - h. Miscellaneous semi-volatile organics: isophorone
  - i. Metals and their compounds: antimony, cadmium, hexavalent chromium, lead, mercury
  - j. Preservatives (antifouling agents): formaldehyde
  - k. Ketones: methyl ethyl ketone, methyl isobutyl ketone
  - l. Miscellaneous volatile organics: acrolein, acrylonitrile

B. Paints and other Architectural Coatings (Specialized applications): Paints and other architectural coatings used in specialized interior and exterior applications (as defined below) shall meet the VOC limitations defined in Rule 1113, "Architectural Coatings" of SCAQMD, of the State of California. The VOC limits defined by SCAQMD, based on 7/9/04 amendments, are as follows. VOC limits are defined in grams per liter, less water and less exempt compounds.

1. Bond Breakers: 350
2. Clear Wood Finishes
  - a. Varnish 275
  - b. Sanding Sealers: 275
  - c. Lacquer: 275
3. Clear Brushing Lacquer: 275
4. Concrete-Curing Compounds: 350
5. Dry-Fog Coatings: 400
6. Fire-Proofing Exterior Coatings: 350
7. Fire-Retardant Coatings
  - a. Clear: 650
  - b. Pigmented: 350
8. Floor Coatings: 50
9. Graphic Arts (Sign) Coatings: 500

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10. Industrial Maintenance (IM) Coatings: 100
  - a. High Temperature IM Coatings: 420
  - b. Zinc-Rich IM Primers: 100
11. Japans/Faux Finishing Coatings: 350
12. Low-solids Coatings: 120
13. Magnesite Cement Coatings: 450
14. Mastic Coatings: 300
15. Metallic Pigmented Coatings: 500
16. Multi-Color Coatings: 250
17. Pigmented Lacquer: 275
18. Pre-Treatment Wash Primers: 420
19. Primers, Sealers, and Undercoaters: 100
20. Quick-Dry Enamels: 250 (50 after 7/1/06)
21. Quick-Dry Primers, Sealers, and Undercoaters: 100
22. Recycled Coatings: 250
23. Roof Coatings: 50
24. Roof Coatings, Aluminum: 100
25. Roof Primers, Bituminous: 350
26. Exterior Rust Preventative Coatings: 100
27. Shellac
  - a. Clear: 730
  - b. Pigmented: 550
28. Specialty Primers: 100
29. Stains: 100
30. Stains, Interior: 250
31. Swimming Pool Coatings
  - a. Repair: 340
  - b. Other: 340
32. Traffic Coatings: 150
33. Waterproofing Sealers: 100
34. Waterproofing Concrete/Masonry Sealers: 100
35. Wood Preservatives
  - a. Below-Ground: 350
  - b. Other: 350
36. Other Coating Types (not included in above): 250

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

**END OF SECTION 01 81 15**

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## SECTION 01 82 00 - DEMONSTRATION AND TRAINING

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including Federal Acquisition Regulations (FAR) and General Services Administration Acquisition Regulations (GSAR) contract clauses, General and Supplementary Conditions, and Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for instructing Government operation and maintenance (O&M) personnel, including the following:
  - 1. Training to Government employees and its contracted O&M personnel must comply with the Federal Buildings Personnel Training Act (FBPTA) P.L.111-308.
  - 2. Demonstration of operation, maintenance, and repair including preventive maintenance of systems, subsystems, and equipment.
  - 3. Training in operation, maintenance, and repair including preventive maintenance of systems, subsystems, and equipment.
  - 4. Demonstration and training video recordings.
- B. Related Requirements:
  - 1. Length of instruction time will be measured by actual time spent performing demonstration and training in required location. Instruction time shall not include time spent assembling educational materials, setting up, or cleaning up.

#### 1.3 SUBMITTALS

- A. Instruction Program: Prior to training, submit draft training materials for GSA and Commissioning Agent review. Submit outline of instructional program for demonstration and training, including a schedule of proposed dates, times, length of instruction time, instructors' names and credentials for each training module, and learning objective and outline for each training module.
  - 1. At completion of training, submit complete training manuals for Government use.
  - 2. Indicate proposed training modules demonstration and training video of on-site training recordings for systems, equipment. In addition also include manufacturer-produced training videos on digital video discs (DVDs).
  - 3. Video quality requirements to be specified by the contracting officer.
  - 4. Acceptable content and technologies.
- B. Qualification Data: Contractor shall submit for approval facilitator and instructor qualifications that meet requirements identified in paragraph 1.4 Quality Control section below.
- C. Attendance Record: For each training module, submit list of participants and length of instruction time.

- D. Evaluations: For each participant and for each training module, submit results and documentation of performance-based test.
- E. Demonstration and Training on flash drive, CD (compact disc), or DVD (digital video disc). Submit 2 copies at end of each training module to the GSA Project Manager and Building Manager.

#### 1.4 QUALITY CONTROL

- A. Facilitator Qualifications: A firm or individual experienced in training or educating O&M personnel in a training program similar in content and extent to that required for this Project, and whose work has resulted in training or education with a record of successful learning performance.
- B. Instructor Qualifications: A factory-authorized service representative, experienced in operational maintenance and repair procedures and training.
- C. Pre-Instruction Conference: The Contractor, facilitator and instructors shall conduct a conference at the Project site to review methods and procedures related to demonstration and training including, but not limited to, the following:
  - 1. Inspect and discuss locations and other facilities required for instruction.
  - 2. Review and finalize instruction schedule and verify availability of educational materials, instructors' personnel, audiovisual equipment, and other facilities needed to avoid delays.
  - 3. Review required content of instruction.

#### 1.5 COORDINATION

- A. Coordinate instruction schedule with Government operations. Adjust schedule as required to minimize disrupting Government operations.
- B. Coordinate instructors, including providing notification of dates, times, length of instruction time, and course content.
- C. Coordinate content of training modules with content of approved emergency, operation, and maintenance manuals. Do not submit instruction program until operation and maintenance data has been reviewed and approved by the Government.

### PART 2 - PRODUCTS

#### 2.1 INSTRUCTION PROGRAM

- A. Program Structure: Develop an instruction program that includes individual training modules for each Tenant Agency and related systems and for equipment not part of a system, as required by individual Specification Sections, and as follows:

	MEP Systems and Equipment	Training Duration (hrs)
--	---------------------------	-------------------------

	Program for HVAC is as follows:	
1	General	4
2	Air Conditioning Units	8
3	HVAC Fans	4
4	Instrumentation and Controls	16
5	VAV & Fan Powered Boxes	4
	Program for Plumbing is as follows:	
1	General	4
2	Water Heaters	4
3	Ejector Pumps	2
4	Plumbing Fixtures	2
	Program for Electrical is as follows:	Training Duration (hrs)
1	Lighting Control Systems	12
2	Motors	2

- B. Reference Material: Conduct training using final operation and maintenance data submittals.
- C. Training Modules: Develop a learning objective and teaching outline for each module. Include a description of specific skills and knowledge that participant is expected to master. For each module, include instruction for the following:
1. Basis of System Design, Operational Requirements, and Criteria: Include the following:
    - a. System, subsystem, and equipment descriptions.
    - b. Performance and design criteria if Contractor is delegated design responsibility.
    - c. Operating and repair standards.
    - d. Troubleshooting schematic
    - e. Regulatory requirements.
    - f. Equipment function.
    - g. Operating characteristics.
    - h. Limiting conditions.
    - i. Performance curves.



2. Documentation: Review the following items in detail:
  - a. Emergency manuals.
  - b. Operations manuals.
  - c. Maintenance manuals.
  - d. Repair manuals
  - e. Project Record Documents. Advise the government if they are not complete.
  - f. Identification systems.
  - g. Warranties and bonds.
  - h. Maintenance service agreements and similar continuing commitments.
3. Emergencies: Include the following, as applicable:
  - a. Instructions on meaning of warnings, trouble indications, and error messages.
  - b. Instructions on stopping.
  - c. Shutdown instructions for each type of emergency.
  - d. Operating instructions for conditions outside of normal operating limits.
  - e. Sequences for electric or electronic systems.
  - f. Special operating instructions and procedures.
4. Operations: Include the following, as applicable:
  - a. Startup procedures.
  - b. Equipment or system break-in procedures.
  - c. Routine and normal operating instructions.
  - d. Regulation and control procedures.
  - e. Control sequences.
  - f. Safety procedures.
  - g. Instructions on stopping.
  - h. Normal shutdown instructions.
  - i. Operating procedures for emergencies.
  - j. Operating procedures for system, subsystem, or equipment failure.
  - k. Seasonal and weekend operating instructions.
  - l. Required sequences for electric or electronic systems.
  - m. Special operating instructions and procedures.
5. Adjustments: Included but not limited to are the following:
  - a. Alignments.
  - b. Checking adjustments.
  - c. Noise and vibration adjustments.
  - d. Economy and efficiency adjustments.
6. Troubleshooting: Include the following:
  - a. Diagnostic instructions.
  - b. Test and inspection procedures.
7. Maintenance: Include the following:
  - a. Inspection procedures.
  - b. Types of cleaning agents to be used and methods of cleaning.
  - c. List of cleaning agents and methods of cleaning detrimental to product.
  - d. Procedures for routine cleaning
  - e. Procedures for preventive maintenance.
  - f. Procedures for predictive maintenance.
  - g. Procedures for routine maintenance.
  - h. Instruction on use of special tools.

8. Repairs: Include the following:
  - a. Diagnosis instructions.
  - b. Repair instructions.
  - c. Disassembly; component removal, repair, and replacement; and reassembly instructions.
  - d. Instructions for identifying parts and components.
  - e. Review of spare parts needed for operation and maintenance.

## PART 3 - EXECUTION

### 3.1 PREPARATION

- A. Assemble educational materials necessary for instruction, including documentation and training. Assemble training modules into a combined training manual.
- B. Set up instructional equipment at instruction location.

### 3.2 INSTRUCTION

- A. Engage the facilitator to prepare instruction program and training modules, to coordinate instructors, and to coordinate between Contractor and the Government for number of participants, instruction times, and location.
- B. Engage the instructors to instruct Government personnel to adjust, operate, and maintain systems, subsystems, and equipment not part of a system.
  1. The Government will furnish Contractor with names and positions of participants.
- C. Scheduling: Provide instruction at mutually agreed on times. For equipment that requires seasonal operation, provide similar instruction at start of each season.
  1. Schedule training with the Government with at least seven (7) days' advance notice.
  2. Coordinate with any subject matter experts that the Government may provide.
- D. Evaluation: At conclusion of each training module, assess and document each participant's mastery of module by use of an oral, written or demonstration performance-based test. Provide results to the Government.
- E. Cleanup: Collect and remove used and leftover educational materials. Remove instructional equipment. Restore systems and equipment to condition existing before initial training use.

### 3.3 DEMONSTRATION AND TRAINING VIDEO RECORDINGS

- A. General: Engage a videographer to record demonstration and training video recordings. Record each training module separately. Include classroom instructions and demonstrations, board diagrams, and other visual aids, but not student practice.
  1. At beginning of each training module, record each chart containing learning objective and lesson outline.
- B. Video: Coordinate with GSA regarding the preferred file type format for video recording of the training sessions. Obtain GSA approval in writing regarding video file format before executing the

training curriculum. If GSA responds and does not note a specific preference, the Contractor shall proceed as follows:

1. Electronic Media: Compact disc or DVD read-only format acceptable to GSA, with commercial-grade graphic label.
  2. File Hierarchy: Organize folder structure and file locations according to Project Manual table of contents. Provide complete screen-based menu.
  3. File Names: Utilize file names based upon name of equipment generally described in video segment, as identified in Project specifications.
  4. Contractor and Installer Contact File: Using appropriate software, create a file for inclusion on the "Equipment Demonstration and Training" DVD that describes the following for each Contractor involved on the Project, arranged according to Project table of contents:
    - a. Name of Contractor/Installer.
    - b. Business Address.
    - c. Business Phone Number.
    - d. Point of Contact.
    - e. Email Address.
- C. Recording: Mount camera on tripod before starting recording, unless otherwise necessary to adequately cover area of demonstration and training. Display continuous running time.
- D. Light Levels: Verify equipment markings are clearly visible prior to recording. Furnish additional portable lighting as required.
- E. Narration: Describe scenes on video recording by audio narration by microphone while video is recording. Include description of items being viewed. Describe vantage point, indicating location, direction (by compass point), and elevation or story of construction.
- F. Transcript: Provide a transcript of the narration. Display images and running time captured from videotape opposite the corresponding narration segment.

**END OF SECTION 01 82 00**

**PART 1 - SECTION 01 91 13 – GENERAL COMMISSIONING REQUIREMENTS**

**PART 1 - GENERAL**

**1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including Federal Acquisition Regulations (FAR) and General Services Administration Acquisition Regulations (GSAR) contract clauses, General and Supplementary Conditions, and Division 01 Specification Sections, apply to this Section.
- B. OPR and BoD documentation prepared by Owner and Engineer contains requirements that apply to this Section.

**1.2 SUMMARY**

- A. Commissioning is a systematic process of ensuring that all building systems perform interactively according to the design intent and the owner's operational needs. This is achieved through coordinated documentation, verification and testing of the work of the contractor trades. The commissioning process shall encompass and coordinate the traditionally separate functions of system documentation, equipment start-up, control system calibration, testing and balancing, performance testing, and training.
- B. This Section includes general requirements that apply to implementation of commissioning without regard to systems, subsystems, and equipment being commissioned. It provides a framework for coordinating the equipment and system testing requirements as specified throughout the Division 22, 23 and 26 specifications.
- C. Related Sections include the following:
  - 1. Division 01 Section 018111 "Sustainable Design Requirements"
  - 2. Division 01 Section 018200 "Demonstration and Training"
  - 3. Division 22 Section 220800 "Commissioning of Plumbing".
  - 4. Division 23 Section 230800 "Commissioning of HVAC".
  - 5. Division 23 Section 230593 "Testing, Adjusting and Balancing for HVAC".
  - 6. Division 23 Section 230900 "Instrumentation and Control for HVAC".
  - 7. Division 23 Section 230993 "HVAC Sequences of Operations".
  - 8. Division 26 Section 260800 "Commissioning of Electrical".

### 1.3 DEFINITIONS

- A. BoD: Basis of Design: A written document that records concepts, calculations, decisions, and product selections used to meet the OPR and to satisfy applicable regulatory requirements, standards, and guidelines. The document includes both narrative descriptions and lists of individual items that support the design process.
- B. CMa: Construction Manager (construction management firm, prime contractor, or general contractor acting as construction manager).
- C. CxA: Commissioning Authority.
- D. OPR: Owner's Project Requirements: A written document that details the functional requirements of a project and the expectations of how it will be used and operated. These include project goals, measurable performance criteria, cost considerations, benchmarks, success criteria, and supporting information.
- E. Systems, Subsystems, Assemblies, Equipment, and Components: Where these terms are used together or separately, they shall mean "as-built" systems, subsystems, assemblies, equipment and components.
- F. TAB: Testing, Adjusting, and Balancing.
- G. MEP Engineer: Includes MEP Engineer identified in the Contract for Construction between Owner and Contractor, plus consultant/design professionals responsible for design of HVAC, electrical, communications, controls for HVAC systems, and other related systems.
- H. Schedule of Submittals: Is a document that is provided by the Construction Manager that lists all the specified submittals; at a minimum there shall be a line for each submittal with space to indicate the status of the specified submittal; the schedule may also have space to track the Operation and Maintenance (O & M) manuals, warranties, start-up reports and training that may also be required by the specifications.
- I. Construction Checklists: Construction Checklists are forms produced by the CxA that are used by the contractor to verify the correct installation of equipment or components by visual inspection.
- J. Construction Reports: Construction Reports are the Construction Checklists after they have been filled out by the Contractor.
- K. Test Procedures: Test Procedures are forms prepared by the CxA that list the steps for executing sequences of operation and other testing functions. First the components and pieces of equipment are checked by using Construction Checklists. Then the Test Procedures are used to verify the interaction of the components and pieces of equipment according to the systems they are in. See related paragraphs below for further discussion.
- L. Test Data Reports: Test Data Reports are the Test Procedures forms after they have been filled out by the Contractor.
- M. Issues Reports: Issues Reports are corrective action documents managed by the CxA. They track Issues in the project that are in question or of concern. The reports come from a data base

in which each issue is a record. While an issue is being resolved it is printed out with other Open Issues in an Open Issues Report. After an issue has been resolved it is printed out in a Resolved Issues Report. All of the Issues together are referred to as the Issues Log.

- N. Training Agenda/Training Plan: A document produced by the applicable trade Contractor that addresses the specific topics included for each training session administered. It is basically a table listing the equipment that personnel are to be trained on, the number of hours of training required for each piece of equipment, the company responsible for doing that training and dates for when it is scheduled and dates when the training was actually done.
- O. Training and Orientation Record: A document produced by a Sub Contractor that address the number of training hours completed for all training sessions.
- P. O&M Manuals: A trade/equipment focused composite document that typically has a binder for each system or piece of equipment installed by a sub contractor.
- Q. Systems Manual: A system-focused composite document that typically has a binder for each system to be commissioned. The documentation in each binder typically includes the Operating and Maintenance Manuals, Approved Shop Drawings of systems Commissioned, Construction Reports, as-built drawings of systems commissioned, and Test Data Reports that are applicable to that system. System summaries and as-built sequences of operation may also be required. Documentation also includes operating instructions for integrated building systems including seasonal operational guidelines, recommended schedule of maintenance requirements and frequency, if not already included in the Project O&M manuals. The HVAC Contractor provides this documentation and assembles the manual based on a detailed outline of the Manual prepared by the CxA including lists of equipment associated with the systems in the project.

#### 1.4 COMMISSIONING TEAM

- A. Members Appointed by Contractor(s): Individuals, each having authority to act on behalf of the entity he or she represents, explicitly organized to implement the commissioning process through coordinated actions. The commissioning team shall consist of, but not be limited to, representatives of each Contractor, including Project superintendent and subcontractors, installers, suppliers, and specialists deemed appropriate by the CxA.
- B. Members Appointed by Owner:
  - 1. Representatives of the facility user and operation and maintenance personnel.
  - 2. Consultants (Architect and engineering design professionals).
  - 3. CMA
  - 4. Contractor
- C. Members Appointed by CMA
  - 1. CxA: The designated person, company, or entity that plans, schedules, and coordinates the commissioning team to implement the commissioning process.
- D. Coordination
  - 1. The CxA will work with the CMA according to established protocols for communicating and scheduling all commissioning activities. The CxA will provide sufficient notice to the CMA for scheduling commissioning activities. The CMA will integrate all commissioning activities into the master schedule. All parties will address scheduling problems and make

necessary notifications in a timely manner in order to expedite the commissioning process.

#### 1.5 OWNER'S RESPONSIBILITIES

- A. Manage the contract of the Architect, Engineer, CMA, and the Contractor.
- B. Provide the OPR documentation to the CxA and each Contractor for information and use.
- C. Provide the BoD documents, approved by the Owner, to the CxA and each Contractor for use in developing the commissioning plan, systems manual, and operation and maintenance training plan.
- D. Assign operation and maintenance personnel and schedule them to participate in commissioning team activities including, but not limited to, the following:
  - 1. Coordination meetings.
  - 2. Training in operation and maintenance of systems, subsystems, and equipment.
  - 3. Testing meetings.
  - 4. Demonstration of operation of systems, subsystems, and equipment.

#### 1.6 ARCHITECT AND ENGINEER RESPONSIBILITIES

- A. Prepare the initial BoD documents for use in development of commissioning plan.
- B. Participate in and perform commissioning team activities including, but not limited to, the following:
  - 1. Commissioning coordination meetings.
  - 2. Construction Checklist inspections.
  - 3. Testing meetings.
  - 4. Demonstration of operation of systems, subsystems, and equipment.
  - 5. Final review at acceptance meeting.
  - 6. Evaluate performance deficiencies identified in test reports and, in collaboration with entity responsible for system and equipment installation, recommend corrective action.
- C. Prepare As-Built BoD documents for inclusion in Systems Manual.

#### 1.7 CONSTRUCTION MANAGER'S RESPONSIBILITIES

- A. Facilitate the coordination between the CxA and the Sub Contractors.
- B. Ensure Commissioning Process requirements and activities are included in all Sub Contractors' contracts.
- C. Coordinate and transfer submittals from the Contractors to the Owner, design professionals, and the Commissioning Authority.
- D. Issue Schedule of Submittals to CxA and MEP Engineer.

- E. Ensure adequate accessibility is provided to properly operate and maintain the facility.
- F. Provide acceptable representation with the means and authority to prepare and coordinate implementation of the Commissioning Process as detailed in the Contract Documents.
- G. Issue the appropriate final reports to the design professionals for review and acceptance.
- H. Ensure deficiencies identified by the Commissioning Authority during verification of the installation or testing are remedied.
- I. Review and comment on the final Commissioning Process Report.
- J. Ensure that all contractors and subcontractors execute their commissioning responsibilities according to the contract documents.
- K. Ensure Contractors and Sub Contractor assigns representatives with expertise and authority to act on behalf of the Contractor and schedule them to participate in and perform commissioning team activities including, but not limited to, the following:
  - 1. Participate in design- and construction-phase coordination meetings.
  - 2. Participate in maintenance orientation and inspection.
  - 3. Provide hard copy and digital submittals to the Owner, design professionals, and the Commissioning Authority through the Construction Manager.
  - 4. Provide updated Project Record Documents to the CxA on a timely basis as required by project schedule.
  - 5. Provide schedule for operation and maintenance data submittals, equipment startup, and System Performance Testing to CxA.
  - 6. Provide technicians who are familiar with the construction and operation of installed systems and who shall develop an implementation plan for the means and methods of executing the Construction Checklists/Construction Reports and Test Procedures/Test Data Reports; and participate in testing of installed systems, subsystems, and equipment.
  - 7. Certify that Work is complete and systems are operational according to the Contract Documents, including calibration of instrumentation and controls and filling out of Construction Checklists
  - 8. Evaluate performance deficiencies identified in Test Data Reports and, in collaboration with entity responsible for system and equipment installation, recommend corrective action, and implementation.
  - 9. Provide qualified trainers (e.g. from equipment manufacturers) for installed equipment, coordinate with CxA regarding schedule and content, and participate in operation and maintenance training sessions.
  - 10. Review and approve final commissioning documentation.
  - 11. Participate in final review at acceptance meeting.
  - 12. Certify date of acceptance and startup for each item of equipment for start of warranty periods
- L. Coordinate the Scheduling of all Training Sessions with the Owner. Ensure proper documentation e.g. Training Agendas are submitted and approved by the Owner before scheduling. Ensure proper documentation of the Training and Orientation Record is being produced by the Sub Contractor to keep track of completed Training.



- M. Ensure Contractors and Sub Contractor provides Operation and Maintenance manuals containing operation and maintenance documentation for all equipment installed under this contract. See Section 1.8 for requirements.
- N. Ensure Contractors and Sub Contractor provides operation documentation for all systems installed under this contract including the Systems Manual (CxA will provide the outline) which includes items indicated in Section 1.10.
- O. Ensure Contractors and Sub Contractors complete Construction Checklists and Test Data Reports in the following sequence:
  - 1. Review and comment on Construction Checklist prior to completion.
  - 2. Fill-out Construction Checklists.
  - 3. Review and comment on Test Data Reports prior to completion.
  - 4. Schedule CxA when test procedure verification will be completed.
  - 5. Fill-out Test Data Reports.
- S. Collect Systems Manuals from the Contractors, assemble and maintain the consolidated Systems Manual for ready access by the Contractors for updating and for tracking and review by the CxA.
- T. Provide electronic copies of Systems Manuals to CxA.

#### 1.8 CxA's RESPONSIBILITIES

- A. Ensure the building is commissioned in accordance with LEED requirements.
- B. Organize and lead the commissioning team.
- C. Prepare a construction-phase Commissioning Plan. The commissioning plan will be issued prior to the Construction Phase kickoff meeting. Collaborate with the Construction Manager and each Sub Contractor to develop Construction Checklists (Inspections) and Test Data Reports (Performance Test procedures). Include design changes and scheduled commissioning activities coordinated with overall Project schedule. Identify commissioning team member responsibilities, by name, firm, and trade specialty, for performance of each commissioning task.
- D. Develop outline for Systems Manual.
- E. Perform a Submittal Review for compliance with the OPR, BoD, Contract Documents, and construction-phase Commissioning Plan.
- F. Perform site visits, as necessary to observe component and system installations such as piping pressure testing, piping flushing procedures, duct cleaning, equipment startups, etc.
- G. Convene commissioning team meetings for the purpose of coordination, communication, and conflict resolution; discuss progress of the commissioning processes. Responsibilities include asking Construction Manager for facilities, preparing agenda and attendance lists, and notifying participants. The CxA shall prepare and distribute minutes to commissioning team members and attendees within five work days of the commissioning meeting.

- H. Prepare project specific Construction Checklists. The Construction Checklists will be issued prior to commissioning related equipment arriving onsite.
- I. Review completed Construction Checklists (Construction Reports).
- J. Prepare Issues Logs and Reports.
- K. Observe and inspect construction and report progress and deficiencies in regard to compliance with the OPR, BoD, and Contract Documents.
- L. Review the construction and installation schedules with Construction Manager, perform sample inspections, and witness major system and equipment startups indicated in Commissioning Plan.
- M. Review the Testing and Balancing Plan and the final Testing and Balancing Report.
- N. Perform a sampling of Testing and Balancing verifications.
- O. Prepare project specific Test Procedures (Test Data Reports) for the functional performance testing of equipment and systems with the collaboration of the Construction Manager and Sub Contractors.
- P. Review the performance testing schedule with the Construction Manager, collaborate with the Contractor's performing the testing to ensure deviations that need to be made from the Test Data Report are acceptable, and witness a sampling of the performance tests.
- Q. Witness any seasonal or deferred testing as required.
- R. Review Contractor's completed Test Data Reports, include them in the commissioning report, and verify contractor has inserted them into systems manual.
- S. Review the training process for the building's Operations and Maintenance Staff to ensure requirements are achieved. This includes the review of the training agendas and the completed training documentation.
- T. Review and comment on the Systems Manual for compliance with the OPR, BoD, and Contract Documents.
- U. Verify Project Record Documents have been provided to Owner.
- V. Analyze any functional performance trend logs and monitoring data to verify optimal performance.
- W. Perform 10 month post occupancy review.
- X. Provide Final Commissioning Report.

#### 1.9 CONTRACTORS' RESPONSIBILITIES

- A. Each Contractor shall assign representatives with expertise and authority to act on

behalf of the Contractor and schedule them to participate in and perform commissioning team activities including, but not limited to, the following:

1. Participate in design- and construction-phase coordination meetings and Commissioning Team progress meetings.
2. Review Design Intent, Basis of Design, and Sequence of Operations.
3. Submit for approval the qualifications of personnel involved in Commissioning.
4. Integrate and coordinate commissioning process activities with construction schedule.
5. Review and accept construction checklists provided by the CxA.
6. Participate in developing and review start-up and checkout procedures and checklists.
7. Review and accept Pre-Functional Testing and Commissioning Process Test Procedures and Checklists.
8. Develop the Testing, Adjusting, and Balancing (TAB) Plan.
9. Review TAB Verification Testing procedures and checklists.
10. Provide hard copy and electronic submittals, including equipment and system submittals and shop drawings to the Owner, design professionals, and the CxA through the CMA.
11. Gather and submit operation and maintenance data for systems, subsystems, and equipment, for the Systems Manual, as specified in Division 01 Section "Operation and Maintenance Documentation" and in this specification section.
12. Provide adequate accessibility as required to properly operate and maintain the facility.
13. Provide acceptable representation with the means and authority to implement the commissioning process as detailed in the Contract Documents.
14. Furnish and Install all equipment, systems, and components.
15. Execute all Construction Checklists.
16. Complete construction checklists as Work is completed and provide electronic copies to the CxA on a weekly basis.
17. Perform all required start-up and checkout procedures.
18. Perform all required Mechanical and Plumbing pipe testing and flushing procedures.
19. Perform all required duct testing and cleaning procedures.
20. Perform all required electrical checkout and testing procedures.
21. Verify and document installation through construction checklists.
22. Perform all required Testing, Adjusting and Balancing (TAB).
23. Perform all Pre-Functional and Commissioning Process Test Procedures.
24. Execute all Test Data Reports.
25. Evaluate performance deficiencies identified in test reports and, in collaboration with entity responsible for system and equipment installation, recommend corrective action.
26. Maintain a log of deficiencies and resolutions for all test procedures. Coordinate with CMA and CxA so that deficiencies and resolutions are incorporated into the CxA's Master Issues Log.
27. Provide Certificates of Readiness.
28. Provide documentation of Warranties.
29. Participate in maintenance orientation and inspection.
30. Provide training of the Owner's O&M personnel and participate in operation and maintenance training sessions.
31. Provide qualified trainers (e.g. from equipment manufacturers) for installed equipment, coordinate with CxA regarding schedule
32. Participate in final review at acceptance meeting.

33. Issue a statement certifying that Work of this Contractor is complete and systems are operational according to the Contract Documents, including calibration of instrumentation and controls and filling out of Construction Checklists.
  34. Certify date of acceptance and startup for each item of equipment for start of warranty periods.
  35. Perform Test Procedures and prepare Test Data Reports. Evaluate performance deficiencies identified in Test Data Reports and, in collaboration with entity responsible for system and equipment installation, recommend corrective action, and implementation.
  36. Compile systems manual.
  37. Review final commissioning documentation.
  38. Conduct and document off-season deferred testing.
  39. Address items generated from Post Occupancy Review.
- B. Subcontractors shall assign representatives with expertise and authority to act on behalf of subcontractors and schedule them to participate in and perform commissioning team activities including, but not limited to, the following:
1. Participate in design- and construction-phase coordination meetings and Commissioning Team progress meetings.
  2. Submit for approval the qualifications of personnel involved in Commissioning.
  3. Integrate and coordinate commissioning process activities with construction schedule.
  4. Review and accept construction checklists provided by the CxA.
  5. Participate in developing start-up and checkout procedures and checklists.
  6. Review and accept Pre-Functional Testing and Commissioning Process Test Procedures and checklists.
  7. Participate in developing the Testing, Adjusting, and Balancing (TAB) Plan.
  8. Participate in review of TAB Verification Testing procedures and checklists.
  9. Provide hard copy and electronic submittals, including equipment and system submittals and shop drawings to the Owner, design professionals, and the CxA through the CMA.
  10. Provide adequate accessibility as required to properly operate and maintain the facility.
  11. Provide acceptable representation with the means and authority to implement the commissioning process as detailed in the Contract Documents.
  12. Furnish and Install all equipment, systems, and components.
  13. Execute all Construction Checklists.
  14. Complete construction checklists as Work is completed and provide electronic copies to the CxA on a weekly basis.
  15. Perform all start-up and checkout procedures.
  16. Perform all required HVAC and Plumbing pipe testing and flushing procedures.
  17. Perform all required duct testing and cleaning procedures.
  18. Perform all required electrical checkout and testing procedures.
  19. Verify and document installation through construction checklists.
  20. Perform all required Testing, Adjusting and Balancing (TAB).
  21. Perform all required Pre-Functional and Commissioning Process Test Procedures.
  22. Execute all Test Data Reports.
  23. Evaluate performance deficiencies identified in test reports and, in collaboration with entity responsible for system and equipment installation, recommend corrective action.
  24. Provide documentation of Warranties.

25. Participate in maintenance orientation and inspection.
  26. Participate in training of the Owner's O&M personnel.
  27. Participate in maintenance orientation and inspection.
  28. Participate in procedures meeting for Test Procedures and Test Data Reports and participate in the actual procedures and reporting.
  29. Participate in final review at acceptance meeting.
  30. Issue a statement certifying that Work of this Subcontractor is complete and systems are operational according to the Contract Documents, including calibration of instrumentation and controls and filling out of Construction Checklists
  31. Provide schedule for operation and maintenance data submittals, equipment startup, and System Performance Testing to CxA for incorporation into the Commissioning Plan. Update schedule on a weekly basis throughout the construction period.
  32. Provide information to the CxA for developing construction-phase Commissioning Plan.
  33. Provide updated Project Record Documents to the CxA on a timely basis as required by project schedule.
  34. Provide hard copy and digital submittals to the Owner, design professionals, and the CxA through the CMA.
  35. Gather and submit to the Contractor operation and maintenance data for systems, subsystems, and equipment, for the Systems Manual, as specified in Division 01 Section "Operation and Maintenance Documentation" and in this specification section.
  36. Compile material for systems manual and deliver to Contractor.
  37. Provide technicians who are familiar with the construction and operation of installed systems and who shall develop an implementation plan for the means and methods of executing the Test Procedures and Test Data Reports; and participate in testing of installed systems, subsystems, and equipment.
- C. Contractor shall provide a line item for the Contractor's responsibilities regarding Commissioning in the Schedule of Values.
- D. Contractor shall provide Operation and Maintenance manual containing operation and maintenance documentation for all equipment installed under this contract.
- E. Contractor shall provide operation documentation for all systems installed under this contract including the Systems Manual which shall include items indicated in paragraph 1.10 below, entitled "COMMISSIONING DOCUMENTATION".
- F. Contractor, with Subcontractors' assistance, to complete Construction Reports and Test Procedure Reports.
1. Review and comment on Construction Checklists.
  2. Fill-out Construction Checklists.
  3. Review and comment on Test Procedure Forms.
  4. Fill-out Test Procedure Forms.
- G. Contractor, with assistance of Subcontractors, to participate in TAB verification testing.
1. Review TAB Verification Testing procedures and checklists.
  2. Perform all TAB Verification Testing.

3. Fill-out TAB Verification Test Procedure Forms.
  4. Provide remedial action and re-testing for systems and equipment identified by CxA as not meeting specified performance requirements.
- H. Contractor, with assistance of Subcontractors, and together with other trade Contractors shall perform a complete "Black-out Test" simulating an electrical utility power failure.
1. Failure test to be performed after the project is substantially complete, but prior to occupancy by the Tenant Agencies.

#### 1.10 COMMISSIONING DOCUMENTATION

- A. OPR: A written document, prepared by Owner that details the functional requirements of Project and expectations of how it will be used and operated. This document includes Project and design goals, measurable performance criteria, budgets, schedules, success criteria, and supporting information.
- B. BoD Document: A document, prepared by MEP Engineer, that records concepts, calculations, decisions, and product selections used to meet the OPR and to satisfy applicable regulatory requirements, standards, and guidelines. The document includes both narrative descriptions and lists of individual items that support the design process.
- C. Commissioning Plan: A document, prepared by CxA, that outlines the schedule, allocation of resources, and documentation requirements of the commissioning process, and shall include, but is not limited to the following:
1. Plan for delivery and review of submittals, Systems Manual and other documents and reports. Identification of the relationship of these documents to other functions and a detailed description of submittals that are required to support the commissioning processes. Submittal dates shall include the latest date approved submittals must be received without adversely affecting commissioning plan.
  2. Description of the organization, layout, and content of commissioning documentation (including Systems Manual and a detailed description of documents to be provided along with identification of responsible parties.
  3. Identification of systems and equipment to be commissioned.
  4. Description of schedules (with coordination with contractor) for Testing Procedures along with identification of parties involved in performing and verifying tests.
  5. Identification of items that must be completed before the next operation can proceed.
  6. Description of responsibilities of commissioning team members.
  7. Description of observations to be made.
  8. Description of scope of requirements for operation and maintenance training, including required training materials.
  9. Description of expected performance for systems, subsystems, equipment, and controls.
  10. Schedule for commissioning activities with specific dates coordinated with overall construction schedule and contractor.
  11. Summary identification of installed systems, subsystems, and equipment, including design changes that occurred during the construction phase.
  12. Process and schedule for documenting changes on a continuous basis to appear in Project Record Documents.

13. Process and schedule for completing pre-start and startup checklists for systems to be verified and tested. (Included in Construction Checklist.)
  14. Step-by-step procedures for Performance Testing of systems with descriptions for methods of verifying relevant data, recording the results obtained, and listing parties involved in performing and verifying tests.
- D. Shop Drawings, Equipment Submittals and Coordination Drawings: The CxA will verify that the processing of these documents is being done effectively. A hard and digital copy of each shop drawing, equipment submittal and coordination drawing indicated on Submittal Schedule mark-up shall be reserved for the CxA. The CxA will receive copies of the reviewed documents like the Contractor does. If the CxA finds something of concern, it will be added to the Issues Log for consideration by the team. This review is solely for the purpose of ensuring that requirements pertaining to commissioning are met and will not constitute approval for any other purpose. The CxA will notify the CMA or A/E as required through the Issues Log, for consideration of items missing or areas that are not in conformance with commissioning requirements.
- E. Construction Checklists/Construction Reports: CxA will distribute detailed construction checklists for components and systems to be commissioned. The Contractor will either comment on the lists, or give written acceptance of them. Each Checklist will typically include model number verification, pre-installation checks, and checks for general installation, piping, electrical and controls installation, and startup. Most line items are a "yes or no" question where "yes" is the correct answer, and "no" indicates a problem. Documentation of specified inspections such as boiler inspections, and specified testing such as hydrostatic, duct leakage testing shall be required to be attached to applicable Construction Checklists/Reports. The last section of the Checklist is for negative responses. Explanations for any "no" answers are required here. Note: Startup and Test Procedures used by a technician that is authorized by the manufacturer of the installed equipment may be used instead of the Construction Checklists, however, the manufacturer's written startup and testing checklists must be approved by the CxA in advance of the testing. The Construction Manager shall administer the distribution and collection of the Construction Checklists. Contractors shall complete the Construction Checklists provided by the CxA, via the Construction Manager. Each piece of equipment receives full pre-functional checkout. No sampling strategies are used. The executed Construction Checklist becomes the Construction Report. Hard and digital copies of the Construction Reports shall be reserved for the CxA.
- F. Test Procedures: CxA will distribute detailed sequence of operation test procedures called Test Procedures for the components and systems to be commissioned to the Construction Manager and the MEP Engineer (for comment). The Contractor will either comment on the test procedures, or give written acceptance of them. The Test Procedures will provide space for testing personnel to sign off on each report. Each test procedure, regardless of system, subsystem, or equipment being tested, shall include, but not be limited to, the following:
1. Name and identification code of tested item.
  2. Test number.
  3. Time and date of test.
  4. Indication of whether the record is for a first test or retest following correction of a problem or issue.
  5. Dated signatures of the person performing test and of the witness, if applicable.
  6. Individuals present for test.
  7. Deficiencies.
  8. Issue number, if any, generated as the result of test.

- G. Test Data Reports: The Contractor will perform and complete the Test Procedures, which shall at that point become the Test Data Reports. The Construction Manager compiles and submits completed Test Data Reports and forwards them for review to the CxA. After review by CxA, approved Test Data Reports will be given to the Construction Manager. The Construction Manager includes them in the Systems Manual. The CxA may also include them in the commissioning report. Hard and digital copies of the Test Data Reports shall be reserved for the CxA.
- H. Issues Log: CxA shall prepare and maintain an issues log that describes design, installation, and performance issues that are at variance with the OPR, BoD, and Contract Documents. Identify and track issues as they are encountered, documenting the status of unresolved and resolved issues.
1. Creating an Issues Log Entry:
    - a. Identify the issue with unique numeric or alphanumeric identifier by which the issue may be tracked.
    - b. Assign a descriptive title of the issue.
    - c. Identify date and time of the issue.
    - d. Identify test number of test being performed at the time of the observation, if applicable, for cross-reference.
    - e. Identify system subsystem, and equipment to which the issue applies.
    - f. Identify location of system, subsystem, and equipment.
    - g. Include information that may be helpful in diagnosing or evaluating the issue.
    - h. Note recommended corrective action.
    - i. Identify commissioning team member responsible for corrective action.
    - j. Identify expected date of correction.
    - k. Identify person documenting the issue.
  2. Documenting Issue Resolution:
    - a. Log date correction is completed or the issue is resolved.
    - b. Describe corrective action or resolution taken. Include description of diagnostic steps taken to determine root cause of the issue, if any.
    - c. Identify changes to the OPR, BoD, or Contract Documents that may require action.
    - d. State that correction was completed and system and subsystem is ready for retest, if applicable.
    - e. Identify person(s) who corrected or resolved the issue.
    - f. Identify person(s) documenting the issue resolution.
  3. Issues Log Report: On a periodic basis, but not less than for each commissioning team meeting, CxA shall prepare a written narrative for review of outstanding issues and a status update of the issues log. As a minimum, CxA shall include the following information in the issues log and expand it in the narrative:
    - a. Issue number and title.
    - b. Date of the identification of the issue.
    - c. Name of the commissioning team member assigned responsibility for resolution.
    - d. Expected date of correction.
- I. Commissioning Report: CxA shall document results of the commissioning process including



unresolved issues and performance of systems, subsystems, and equipment. The commissioning report shall indicate whether systems and subsystems have been completed and are performing according to the OPR, BoD, and Contract Documents. The commissioning report shall include, but is not limited to, the following:

1. Narrative description of systems commissioned and the results.
2. Lists and explanations of substitutions; compromises; variances in the OPR, BoD, and Contract Documents; record of conditions; and, if appropriate, recommendations for resolution. This report shall be used to evaluate systems and subsystems and shall serve as a future reference document during Owner occupancy and operation. It shall describe components and performance that exceed requirements of the OPR, BoD, and Contract Documents and those that do not meet requirements of the OPR, BoD, and Contract Documents. It may also include a recommendation for accepting or rejecting systems and subsystems.
3. OPR and BoD documentation.
4. Commissioning plan.
5. System Performance Testing plans and reports.
6. Corrective modification documentation.
7. Issues log.
8. Completed System Performance Test checklists.
9. Listing of off-season System Performance Test(s) not performed and a schedule for their completion.
10. List outstanding items.

J. O&M Manuals: Sub Contractors gather the required information and compile the O&M Manuals. O&M Manuals include, but are not limited to, the following for each commissioned system:

1. Name, Address, Company, and contact information of equipment manufacturers/vendors and any subcontractors involved in the construction and installation of the system or equipment.
2. Approved shop drawings and submittals of equipment and systems commissioned, with the technical information catered to the installed equipment and systems.
3. System single line diagrams.
4. As-built sequences of operations including time-of-day schedules, schedule frequency, detailed point listings and ranges, control drawings and original set-points.
5. Operating instructions for integrated building systems equipment including seasonal operational guidelines.
6. Equipment Parts List
7. Condensed preventative maintenance instructions highlighting warranty specific requirements.
8. Recommended schedule of maintenance requirements and frequency.
9. Troubleshooting table for issues not covered above if applicable
10. Warranty Information

K. Systems Manual: Sub Contractors gather and submit required information and documentation for the Systems Manual. The Construction Manager compiles the Systems Manual based on the outline document provided by CxA. The Systems Manual shall be labeled, indexed, and tabbed in 3-ring binders and will also be available electronically. Systems manual shall include, but is not limited to, the following for each commissioned system:

1. OPR, including changes made throughout the Project.

2. BoD, including system narratives, schematics, and changes made throughout the Project.
3. Name, address, and contact information of the installing contractors, equipment vendors, and equipment manufacturers involved in the construction and installation.
4. System Single Line drawings
5. As-built drawings of systems commissioned.
6. O&M Manuals
7. Recommended Schedule for retesting of commissioned systems
8. Equipment Startup Reports and System Tests.
9. Completed Test Data Reports (functional performance test results (benchmarks)), and blank Test Data Reports from the original Commissioning Plan.
10. Recommended schedule of calibrating sensors and actuators by type and use.
11. Troubleshooting table for issues not covered above if applicable.
12. Commissioning Documentation: All commissioning documentation will be sent to the Construction Manager for inclusion in the Systems Manual including, but not limited to, the completed Construction Checklists, blank Construction Checklists, and Issues Log Reports.

Prior to substantial completion, the CxA shall review the Systems Manual (O&M Manuals, system test documentation, as-built drawings, etc. for systems that were commissioned) to verify compliance with the Specifications. The CxA will communicate deficiencies in the manuals to the Owner, CMa or A/E, as requested. Upon a successful review of the corrections, the CxA will recommend approval and acceptance of the Systems Manual. This work does not supersede the A/E's review of the O&M manuals according to the A/E's contract.

- L. Training Agenda: Sub Contractor prepares a written plan that details the agenda for each intended training session. The training agenda is submitted to the Owner via the Construction Manager for input and acceptance before scheduling. The Construction Manager schedules the Owner's personnel and subcontractors for each training session. Each training agenda includes, but is not limited to the following:
1. Equipment/System to be Discussed
  2. Name, Company, and contact information of Trainer(s)
  3. Topic Outline for each piece of equipment/system
  4. Location of Training (Field, Classroom, etc.)
  5. List of Resources intended to be used and/or reviewed during the Training Session (As-Built Drawings, Manufacturer's O&M Manuals, Approved equipment submittals, etc.)
  6. Intended length of time expected for the training session
- M. The Training and Orientation Record is a table that contains the documentation for the number of hours of completed Training. This record is provided by a Sub Contractor for the Owner's Operating Personnel, the Trainer, and the Sub Contractor to sign at the completion of each training session. The Training and Orientation Record includes but is not limited to the following for each commissioned system:
1. Systems/Equipment covered in the Training Session
  2. Number of Training Hours Required for that System/Equipment
  3. Dates of Completed Training Sessions

4. Totals of Training Hours Completed
5. Owner's Operating Personnel Signature(s)
6. Trainer's Signature(s)
7. Sub Contractor's Signature(s)

The Sub Contractor submits the completed Training and Orientation record to the Construction Manager and the CxA for review. The CxA will recommend acceptance to the Owner, A/E, and CMA as requested.

#### 1.11 SUBMITTALS

- A. Commissioning Plan Pre-final Submittal: CxA shall submit hard copies of pre-final commissioning plan to Owner, and one to MEP Engineer. Present submittal in sufficient detail to evaluate data collection and arrangement process. One copy, with review comments, will be returned to the CxA for preparation of the final construction-phase commissioning plan.
- B. Commissioning Plan Final Submittal: CxA shall submit four hard copies and one set of electronically formatted (digital) information of final commissioning plan. Deliver one hard copy and one set of digital files to Owner, and one copy to MEP Engineer. The final submittal must address previous review comments. The final submittal shall include a copy of the pre-final submittal review comments along with a response to each item.
- C. Submittal Schedule: Construction Manager shall submit to CxA. CxA shall select submittal required for review from the submittal schedule.
- D. Construction Checklists: CxA shall submit Construction Checklists for systems indicated in the Commissioning Plan, to the Construction Manager. The Construction Manager coordinates and distributes these checklists to the applicable subcontractors to complete during the construction phases.
- E. Completed Construction Checklists: CMA shall submit completed Construction Checklist to CxA for review.
- F. Test Data Reports: CxA shall submit Test Data Reports (field testing procedures) to the Construction Manager to distribute to the applicable subcontractors for their review before the testing is scheduled. CxA will witness a sampling of the performance and completion of the Test Data Reports.
- G. Completed Test Data Reports: The Construction Manager shall submit completed Test Data Reports to CxA for review.
- H. Corrective Action Documents: CxA shall submit Issues Logs and Reports.
- I. Pre-final Commissioning Report Submittal: CxA shall submit four hard copies of the pre-final commissioning report. CxA shall deliver one copy to Owner and one copy to MEP Engineer. One copy, with review comments, will be returned to the CxA for preparation of final submittal.
- J. Final Commissioning Report Submittal: CxA shall submit one hard copy and set of electronically formatted (digital) information of the final commissioning report. CxA shall deliver one hard copy and one set of digital files to Owner, and one copy to MEP Engineer. The final submittal must

address previous review comments and shall include a copy of the pre-final submittal review comments along with a response to each item.

#### 1.12 QUALITY ASSURANCE

- A. Instructor Qualifications: Instructors shall be factory-authorized service representatives, experienced in training, operation, and maintenance procedures for installed systems, subsystems, and equipment.
- B. Test Equipment Calibration: Comply with test equipment manufacturer's calibration procedures and intervals. Recalibrate test instruments immediately whenever instruments have been repaired following damage or dropping. Affix calibration tags to test instruments. Instruments shall have been calibrated within six months prior to use.

#### 1.13 COMMISSIONING COORDINATION

- A. Coordinating Meetings: CxA shall conduct coordination meetings of the commissioning team to review progress on the commissioning plan, to discuss scheduling conflicts, and to discuss upcoming commissioning process activities.
- B. Test Procedure Testing Coordination: CxA shall review sequence of testing activities for major systems with Contractor to accommodate required quality-assurance and -control services with a minimum of delay and to avoid, where possible, necessity of removing and replacing construction to accommodate testing and inspecting.
  - 1. Schedule with Construction Manager the times for observation of tests, inspections, obtaining samples, and similar activities.
  - 2. CxA may observe sampling of tests by Sub Contractors and his personnel.
- C. Manufacturers' Field Services: Sub Contractors shall coordinate services of manufacturers' field service technicians as appropriate.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

PART 2 - **END OF SECTION 01 91 13**

